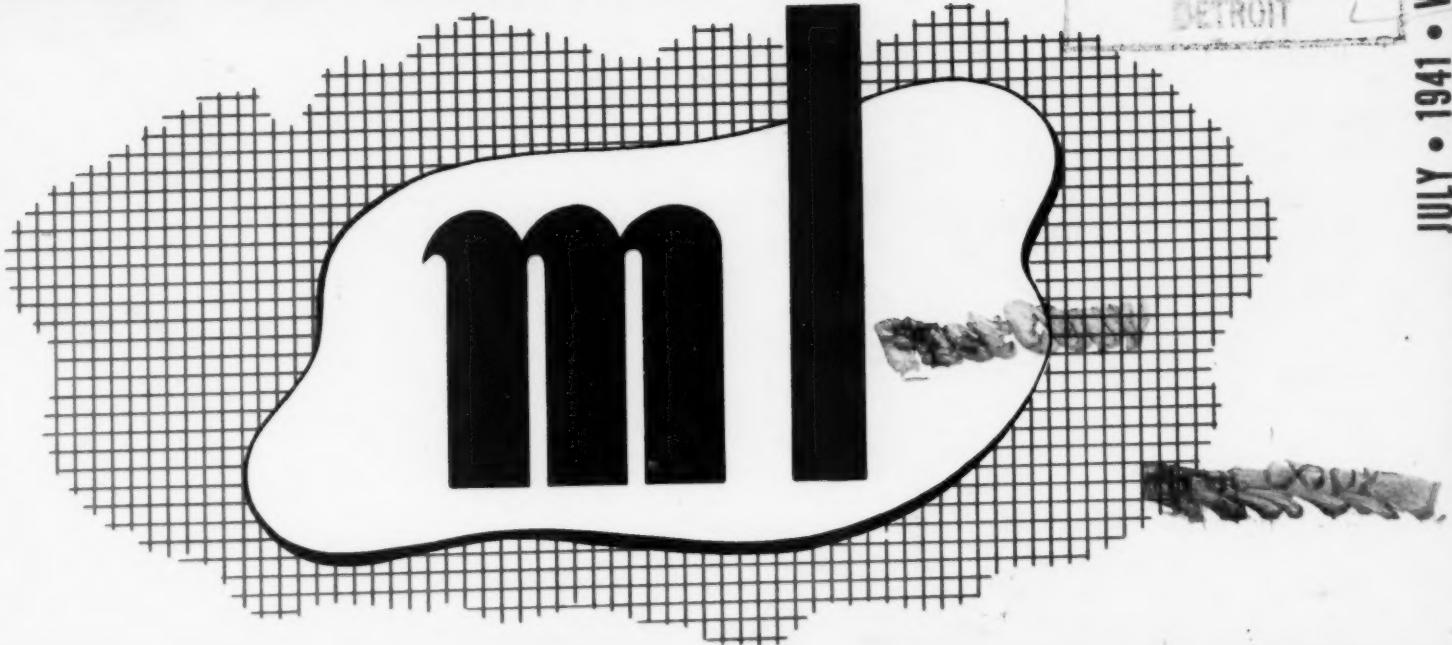


MODERN



LITHOGRAPHY

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JULY • 1941 • VOL. 9 • NO. 7

Oriental Blue 61FP

Senelith Inks

were the first lithographic inks
made from dyestuffs
treated with sodium tungstate
for better sunfastness
and are still leading
with their outstanding resistance properties

The Senefelder Company, Inc.

"Everything for Lithography"

32-34 Greene Street Tech

New York, N. Y.

CAN YOU USE SOME NEW IDEAS?

...then see the work others are doing today!



Get this new collection of offset jobs produced for leading advertisers

IT TAKES IDEAS to sell offset printing. One good place to look for them is among the work being done for advertisers today. To help you do that, Hammermill has gathered another collection of commercial offset-printed specimens on Hammermill Offset.

Perhaps you have already received this set. If so, you have noticed it represents a wide range of work . . . from menus to broadsides . . . from simple one-color to striking four-color pieces . . . all top-notch jobs done for active advertisers in all parts of the country. Every one an idea with possibilities for you to turn into a job of your own.

Notice also that Hammermill Offset is the outstanding choice of these advertisers who want outstanding work. This paper delivers jobs *your* customers will like, too—sharp, readable type . . . rich halftones . . . brilliant color reproduction . . . no objectionable "show through."

And *you* will like Hammermill Offset's trouble-free press performance. It's the paper that pays two profits—one when you run the job, a second when your satisfied customer reorders. If you haven't received your set of these specimens, send for it now.

▲ ▲ ▲

This is the eleventh set of commercial specimens on Hammermill Offset collected for their idea value to offset printers. If you are not getting these sets, and would like them in the future, drop a line to Hammermill. There is no obligation. (Sorry, back sets cannot be supplied.)

HAMMERMILL OFFSET

BY THE MAKERS OF HAMMERMILL BOND

*Send
for it!*

Hammermill Paper Company, Erie, Pa.
Please send me, free, the collection of
commercial jobs on Hammermill Offset.

ML-JUL.

Name _____

Position _____

(Please attach to your business letterhead)

SENEFELDER

LITHOGRAPHIC SUPPLIES

Everything to make the job easier 



Each month we will
briefly describe an
outstanding item in
the Senefelder group
of supplies for the
lithographer.

SENEFIX SOLUTION

One of the most vexing problems met with on every lithographing press at one time or another is "roller stripping." It manifests itself with streaks or blind spots on the ink distributing rollers or steel riders while the press is in operation. If not remedied immediately it is apt to spoil the entire job on the press. "Roller stripping" is caused by free acid or uncontrolled chemicals which react on the surface of the steel riders while the press is running. This reaction oxidizes portions of the steel riders and prevents them from accepting ink freely and conveying it uniformly onto the lithographic plate.

Whatever the cause of the trouble may be, Senefix Solution will remedy it. Senefix Solution applied to blind spots on the steel riders reduces loss of production to a minimum; the steel riders can be reconditioned in the press without having to be taken out.

Senefix Solution eliminates the messy use of pumice powder or metal polish and oleic acid; it rubs out blind spots in one operation and causes the riders to re-accept the ink uniformly. Senefix Solution restores the primary function of the steel riders which is to distribute the ink uniformly onto the lithographic plate; it banishes all worry about "roller stripping" and "split fountain trouble."

Write for leaflet No. 188 describing characteristics of Senefix Solution, directions for use and prices.

The Senefelder Company, Inc.

"Everything for Lithography"

32-34 GREENE ST.

NEW YORK, N. Y.

Absorbent Cotton
Acids, Litho
Acid Brushes
Alum Powder
Aluminum Plates
Antifit Rubber
Preserver
Asphaltum Liquid
Asphaltum Powder
Berlin Paper
Bronze Powders
Bronzing Pads
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Cellulose Cleaning
Paper
Charcoal Sticks
Chemicals, Litho
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Double Etch Salt
Durelac Lacquer
Egg Albumen
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Gelatine Foils
Glass Marbles
Glycerine
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Nitric Acid
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Offset Inks
Offset Powder

Opaque
Palm Oil
Pens, Litho
pH Slide Comparators
Photographic Gelatine
Platinum Etch Salt
Plates, Lithographic
Press Boards
Printing Inks
Process Glue
Process Oil
Proofing Inks
Pumice Powder
Quartz, Graining
Rolling-up Ink
Rosin Powder
Rubber Snake Slips
Rubbing Stones

Schumacher Slips
Scotch Hone
Scotch Slips
Scotch Tape
Scraper Leather
Scraperwood
Senebumen
Senelac Varnish
Sensitizers
Sharp Etch
Snake Slips
Soapstone
Sponges
Steel Balls
Steelclay Marbles
Stone Cement
Strecker Salt
Sulphur Flour
Tracing Blue
Tracing Paper
Transfer Ink
Transfer Papers
Transparency
Solution
Tusche
Varnishes
Wire Brushes
Zinc Plates
Etc., Etc.

MODERN LITHOGRAPHY

PUBLISHED IN THE INTERESTS OF LITHOGRAPHERS EVERYWHERE



THE COVER

Harrison Lake, beauty spot of the West, one of sixty scenic prints now being distributed by Standard Oil of California and lithographed by Crocker Union, San Francisco. See page 18 for details.

July, 1941

Volume 9 No. 7

Nothing lends itself better to reproduction by lithography than photographs of natural scenery. Audubon, though without benefit of photography, knew this and today his lithographed bird studies are collectors' items. The Standard Oil Company of California has taken a leaf from the notebook of Audubon and made a series of scenic studies of some of the West's most picturesque spots. Crocker Union lithographed them and they, too, have become collector's items. (Page 18)

There's a lot about a process lens—how to select it, use it and properly care for it—which every lithographer should know. (Page 20)

Sometime within the next two months the Lithographers National Association will publish a verbatim report of the technical session which was held at the convention at White Sulphur Springs in May. When it does every lithographer will want a copy. It was one of the best meetings of its kind held this year. Meantime, those interested will have to content themselves with a report covering the highlights of the meeting. (Page 24)

Defense and lithography are interrelated today. How the first is affecting the second we hope to report from time to time in a new column beginning in this issue. (Page 33)

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MODERN LITHOGRAPHY
Reg. U. S. Pat. Office

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LITHO-PRINT SAMSON OFFSET ROLLERS

With **Samson** (Vulcanized Oil) and **Litho-Print** (Rubber) Offset Rollers, **Bingham** co-operates with American printers in producing offset printing of outstanding quality at minimum cost.

The new, improved **Samson**, rapidly becoming famous among fine-quality offset printers, has as its most noteworthy feature the smoothest, yet toughest surface available in Vulcanized Oil rollers; its performance has set new standards in the offset world.

Litho-Print, **Bingham's** modern rubber roller for offset work, supreme in the field, combines perfection in ink distribution with the durability and long life inherent in rubber materials.

And — the sixteen modern **Bingham** plants, strategically located, insure maximum convenience and economy for our customers. Our nearest representative, backed by **Bingham's** 94 years of roller-making experience, will be glad to assist you with your offset roller problems.

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Keeping in Touch

PREPARED BY INTERNATIONAL PRINTING INK DIVISION OF INTERCHEMICAL CORPORATION • JULY, 1941

MATERIAL SHORTAGES AFFECT GRAPHIC ARTS

Research and Reserve Stocks Offer Hope For Future

The quickening pace of our defense program, with its resultant drain on metals, chemicals, and dozens of other industrial essentials is already a concern to lithographers and suppliers, and no doubt it will affect this industry more seriously.

Naturally, lithographers and supply firms alike are glad to make any sacrifices that will help to speed the defense effort. To determine the probable extent that these sacrifices will be necessary, International Printing Ink has just made a careful survey of priorities and shortages and their present and potential bearing on the Graphic Arts.

Here are some pertinent facts which this survey indicates:

Metallic Inks Scarce

As lithographers know, scarcity of metals for non-defense uses is already a problem. No aluminum will be available to general industry, for an indefinite period. This affects aluminum inks, powders, and plates.

Zinc shortages are imminent. This will affect zinc plates and many zinc pigment compounds used in the manufacture of inks and colors.

Steel and tin are being used in ever-increasing quantities for defense. Tin will undoubtedly be restricted drastically since the United States produces no tin and since shipping is becoming more difficult. Steel demand

Over Burma Road Come Lithographic Essentials



Photo by Maurice E. Sheahan from Acme

Over the Burma Road, "lifeline" of the Chungking government of China, must come tung oil, tungsten, and Chinawood oil—important materials in the manufacture of lithographic inks.

is expected to exceed capacity by fall.

Molletons and flannels are slower in delivery, and new restrictions on cotton and wool may affect the availability of these lithographic "indispensables."

Litho Supplies Affected

Rubber blankets may soon be limited. Rubber reserves are being built up, but the production of motorized army units will soon reduce these.

Imported items, such as gum arabic, steel engraving needles from Switzerland and transfer papers from France, are very difficult to obtain.

No More Imported Colors

Certain imported colors, such as siennas, and umbers, are no longer coming in, but reserve stocks are still available. The lack of shipping facilities has reduced the supply of petroleum products, which must come to the East largely by tankers. Linseed oil, two-thirds of which is produced from domestic seeds, is at present available in sufficient quantities.

Chinawood oil and tungsten (used for several ink colors) are dependent on the Burma Road for export. Here, too, shipping shortages slow deliveries.

Titanium dioxide, zinc oxide, and other whites are all in demand for some phase of defense industry.

There can be little doubt that shortages will increasingly affect lithography and the manufacture of printing ink. Alleviation of this situation by methods within our control depends on an intelligent application of substitutes.

Research is Hope For Future

For many years, IPI has based its business on fundamental research. IPI's Laboratories are working constantly to find new ink formulations which will not interfere with priorities. With this grave problem of shortages facing the lithographic industry, remember to "keep in touch with IPI."

What About Deliveries?

IPI's factories are working overtime to meet the demand for inks and related products. In this situation, delivery dates are bound to be affected. However, we are doing our best to supply you with the materials you need, and we have every intention of maintaining our service.

IPI is not stocking up on materials which will be required for the defense program; to do this invites difficulties and defeats the purpose of the priority system. We suggest to customers that there is no reason for them to buy inks for inventory. We expect to make use of all our facilities in supplying the needs of lithographers indefinitely.



Tankers like this are being diverted to military uses. This means oil shortages for many industries along the Eastern seaboard.

Advertisement



STRATEGY IN SELLING

By J. C. Aspley

HERE is something that sales managers have been asking for! The experience of America's most successful sales producers has been boiled down and published by Dartnell Corporation, Chicago, in seven handy pocket size brevity books. A real working tool which more than three hundred sales managers have helped to forge. "Strategy In Selling" has been created to help your salesmen close more business, get better interviews, handle price objections, make more calls. These seven pocket size manuals are the most practical and helpful sales training aids ever made available for the average sales organization.

MODERN LITHOGRAPHY
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Please send me sets of Strategy in Selling, by J. C. Aspley. Check (or money order) inclosed at \$6.00 each set.

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City..... State.....

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1. Planning the Sale

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Make No Little Plans

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Door-Openers That Seldom Fail
How to Win Favorable Interest
Holding Attention After You Get It
Prospecting for Prospects
Using the Telephone to Get Leads
How to Attract People to You

3. Making the Presentation

Strategies of the Presentation
Making the Buyer Want It
Presenting Your Proposition
The Different Kinds of Buyers
Proving Your Case
Making Your Story Interesting

4. Disposing of Objections

Strategy in Meeting Objections
The Five Kinds of Objections
The "Yes—But" Plan
When a Buyer Kicks at Price
"My Business Is Different"
"Come Back Later"
About Leaving Booklets
The Reciprocity Bugaboo

5. Closing the Sale

Getting the Order
The "Dropping In" Habit
Thinking in Terms of Orders
The Foundation for the Close
Helping the Buyer to Decide
Knowing When to Close
The Final Push
Order Blanks to Help Closing
Nailing Down the Orders

6. Managing Your Time

A Salesman's Stock in Trade
What Is Your Territory Worth?
Are Large Territories a Handicap?
Making the Most of Time
Control Records a Salesman Needs
The Bee-Line Method of Working
Keeping Red Days in the Black
Using Old Customers to Sell New Ones

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Be Your Own Sales Manager
How Salesmen Get Ahead
Getting Along with Buyers
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Making Good Where You Are
Keeping Your Eye on the Main Chance
Twenty Checking Points

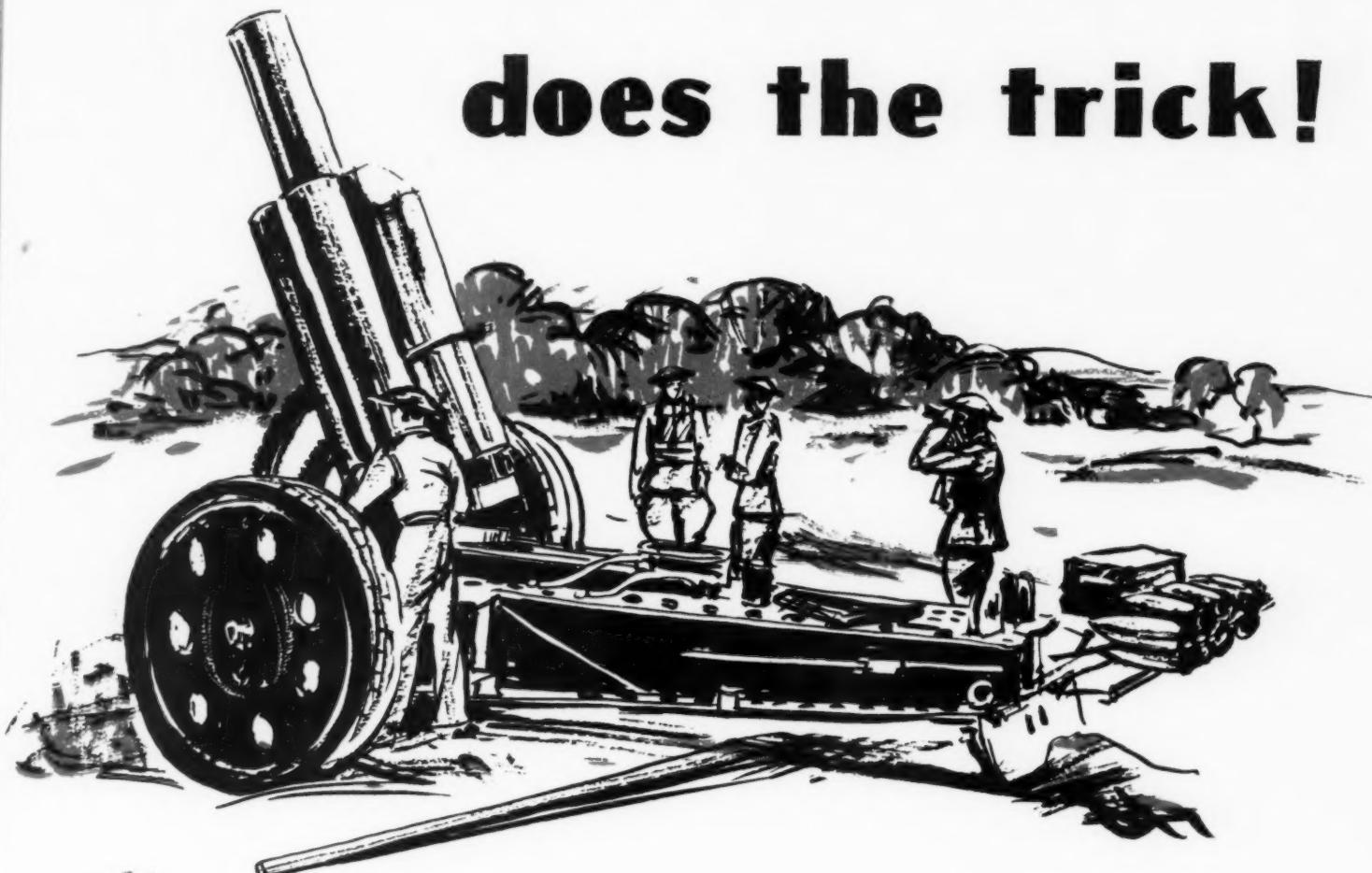
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COLOR

does the trick!



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Color in printing can be employed with equal effectiveness. Attention, truthful representation and easier identification of

the product, and an increased desire to buy can all be achieved more readily thru the intelligent application of color.

You can rely upon Sinclair and Valentine inks for color that is both rich and powerful. In addition, our long experience with technical requirements guarantees uniformity and trouble-free operation on your presses.

Use COLOR for more effective printing—use Sinclair and Valentine inks for more EFFECTIVE color.

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VALENTINE CO.
611 WEST 129TH STREET
NEW YORK N.Y.

CONVENTION

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• Take Your Problems to Cincinnati in September

P
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Save up your hardest questions! Assemble your stiffest problems! Get 'em all together and bring 'em along to the 9th Annual Convention of the National Association of Photo-Lithographers, to be held at the time and place given above. Without a doubt the coming NAPL meeting promises to be one of the liveliest, most stimulating, most informative and generally all-around helpful gatherings in the history of this association. Examine the tentative program given below. Look over the names of the experts assembled from all over the country to answer your most

difficult questions and to help you cope with your most trying problems. See for yourself what lies in store for you next September. You'll soon be convinced that this is a meeting you absolutely cannot afford to miss. Think it over now and plan to attend. Every minute of this convention is being planned to help make you a better lithographer. Why not send in your reservation now, while it is still fresh in your mind? Reservations made prior to September 10th are \$5.00. After that they will be \$7.50. Let us hear from you today, won't you?

TENTATIVE PROGRAM

1. "The Paper Work Involved in Handling An Order to Advantage."
2. "Training and Directing a Sales Force."
3. "Advertising for New Business."
4. "Equipment From Management's Viewpoint."
5. "The Zinc and Aluminum Situation."
6. "Why Lithography—A Buyer's Viewpoint."
7. "The Human Side of Lithography."
8. "Estimating and Costs."
9. "Trade Practices Today and Tomorrow." (Negatives and plates, charging for color proofs, overruns, etc.)
10. "Suggestions for Setting Up Shop Rules."
11. "Installing the NAPL Cost System."

AND A PANEL OF EXPERTS INCLUDING: Ted Belitz, American Colotype Corporation; Henry Bruning, The Gerlach-Barklow Co.; Fred Burtanger, Reynolds & Reynolds Co.; Summerfield Eney, Champion Paper & Fibre Co.; A. J. Fay, National Process Co.; Harvey Glover, Sweeney Lithograph Co.; Joe Machell, Stecher-Traung Lithograph Co.; Al Rossotti, Rossotti Lithograph Co.

THE FOLLOWING EQUIPMENT AND SUPPLY MANUFACTURERS

WILL EXHIBIT AT THE CONVENTION: Agfa Ansco, The Champion Paper & Fibre Company, Ralph C. Coxhead Corporation, The Dayton Rubber Manufacturing Company, Eastman Kodak Company, The Fuchs & Lang Manufacturing Company, Division General Printing Ink Corporation, Godfrey Roller Company, Hammer Dry Plate & Film Co., Mallinckrodt Chemical Works, Merck & Co., Inc., Nelson Associates, Inc., Harold M. Pitman Co., Rapid Roller Company, Rutherford Machinery Company, Division General Printing Ink Corporation, Sinclair & Valentine Co., Vandercook & Sons.

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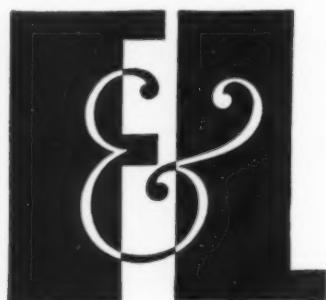
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● In 6000 A. D. when they open the Time Capsule MODERN LITHOGRAPHY will be Ancient History.

So will you, for that matter, solemn thought.

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Foreign and Canada \$4.00.

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Company _____

Address _____

City _____ Country _____

Type of Business _____ Position _____

GOING FISHING?



These are the days we all like to clear off our desks and go fishing . . . When casting for fish, it is well to remember that fish and customers have one thing in common . . . THEY TAKE WHAT THEY WANT . . . not always what you choose to give them! You'll find that litho printing customers take kindly to PACEMAKER OFFSET and BROCKWAY COVER because they get what they want in the finished job.

Pacemaker Offset
Available from mill stock in white and five colors and in eight embossed patterns, as well as the regular machine finishes. Laid marks, deckle-edge and special colors available on order.



Brockway Cover
Comes in nine pleasing finishes and eleven colors. Available in basis 20x26-50 and 65 lb. weights. In 20x26 - 23x35 and 26x40 sizes. Other sizes and weights on order.



Write us on your business letterhead for full information and samples.

GEORGE A. WHITING PAPER COMPANY

MENASHA, WISCONSIN

FOR **SPEED**
and Color Fidelity

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WHITE FLAME
PHOTOGRAPHIC CARBONS

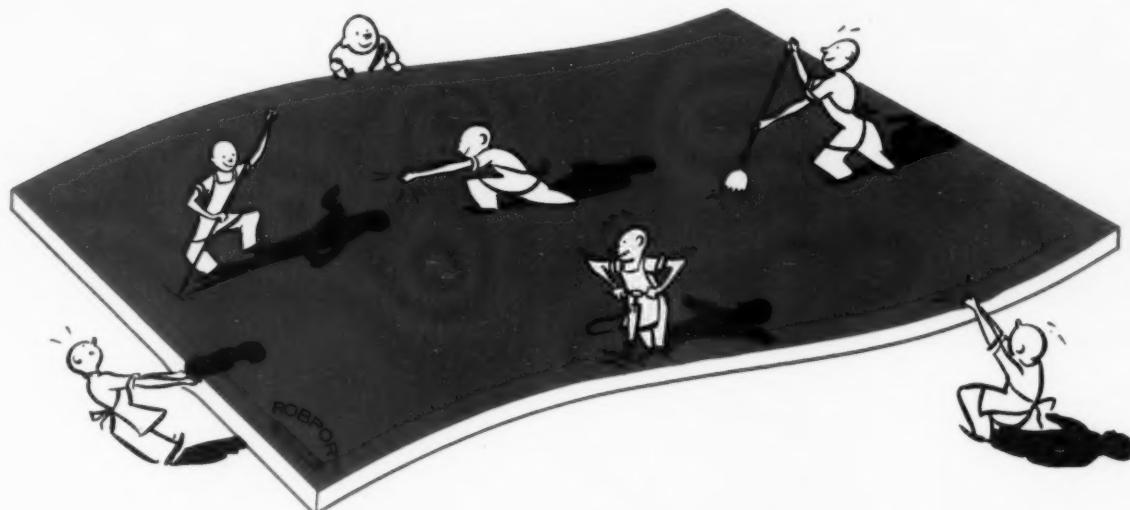
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VIOLET GREEN YELLOW RED

The presence of ALL spectral colors in the light from "National" White Flame Photographic Carbons and the balanced intensities of these colors simplify the lithographer's work. Maximum speed and color fidelity are assured in the preparation of either black and white or color process plates.

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BRANCH SALES OFFICES: NEW YORK PITTSBURGH CHICAGO ST. LOUIS SAN FRANCISCO

THE ROBPORT BLANKET can take it



EVER bothered with Pressroom Heebie Jeebies—those elusive pests, sometimes known as the "bad breaks," that invade the lithographic pressroom and upset delivery schedules just when production is heavy? Their chief point of attack is the rubber blanket and the damage they do causes a yearly boost in the sale of headache powders to distraught lithographers.

There's no way of keeping them out, but there's one way to get them mighty discouraged . . . and that's by using the ROBPORT BLANKET. It's made of the highest grade fabric available and will see you through the toughest schedule without batting an eyelash. It's been surface-treated against stretching; will resist tear and fracture, tackiness, embossing, blistering and engraving; and has absolute uniformity of thickness.

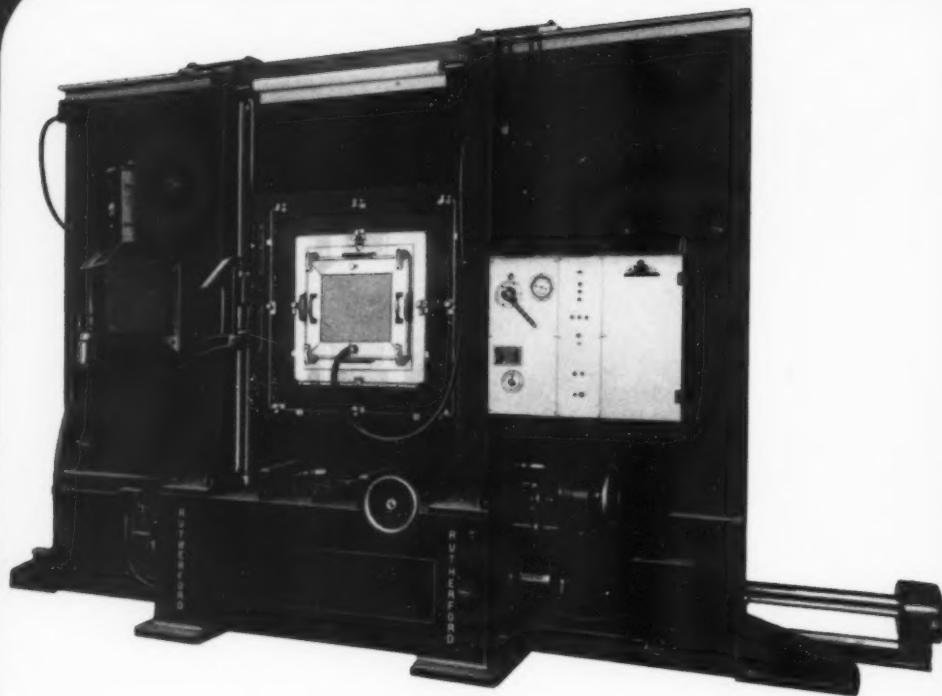
For stamina, resistance and all-round dependability pressmen prefer ROBPORT, the blanket that can take it!

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MACHINE



Send for Folder with new Specifications

NEW SIZES: For press plates up to 56" x 72" and negative holders 30" x 40" or larger.

NEW CONTROL PANEL: All controls centrally located in one place at the operator's finger tips.

NEW DIALS: Direct reading in inches and thousandths — at a glance.

NEW ATTACHMENTS: For producing multiple negatives on film or glass.

RUTHERFORD MACHINERY COMPANY
DIVISION GENERAL PRINTING INK CORPORATION

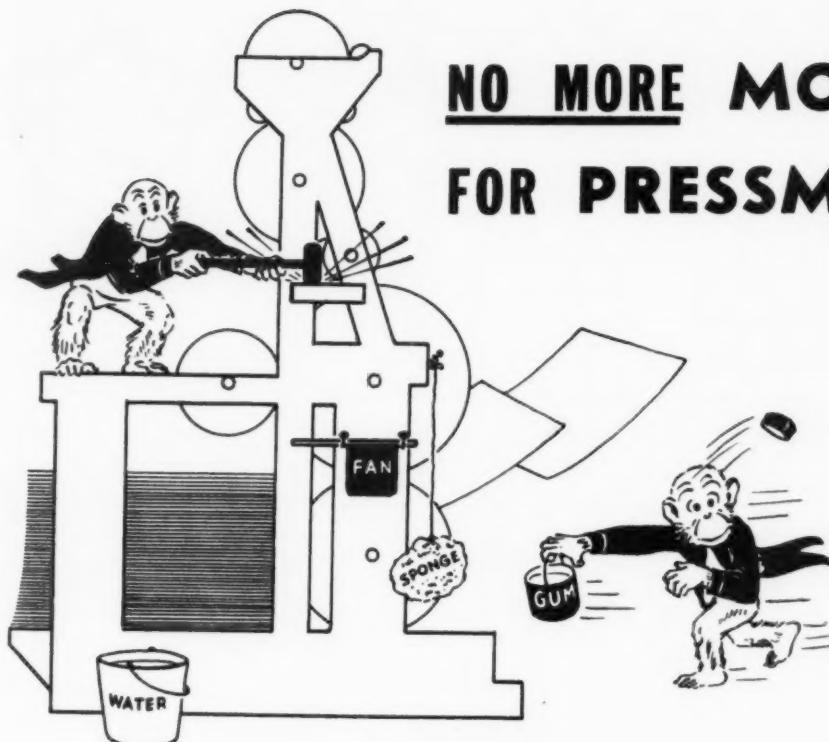
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**NO MORE MONKEY WORK
FOR PRESSMEN WHEN
*SOLIO***

IS USED IN THE
FOUNTAIN SOLUTION

*Especially recommended
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3 ounces of "SOLIO" added to each gallon of fountain solution makes manual gumming and fanning of the Press Plate unnecessary. "SOLIO" automatically gums the plate when the press stops and removes the film automatically when the press restarts. "SOLIO" cannot harm plates, rollers or blankets. Full directions with each container.

***One of America's largest
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as follows:***

"We have tested Solio and find it protects the plate as well as gum does. It is uncanny how quickly Solio seals the plate the moment the press stops, and dissolves on restarting."

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EDITORIALS

THE movement now afoot for cooperative action and national unity among the graphic arts, which provides for the setting up of a federation capable of adequately representing all the branches of the graphic arts in national defense and all other aspects of the national scene—social, political, legislative, economic—deserves the thoughtful attention of the lithographic industry. That local and national trade associations are indispensable in preserving and furthering the interests of single groups in the graphic arts is beyond saying, but that there are conditions which have latterly developed arising out of the national emergency which call for united action is obvious. Such intragraphic arts industry problems as shortage of skilled help with its attendant evil of pirating labor; shortage of materials and equipment, giving rise to unhealthy conditions of competition and costs; shifting markets, with possible reduction in the purchase of printing because of concentration on defense by former buyers—such problems as these, and they are only a few, face the entire graphic arts right now. We believe that a national federation composed of group representatives of each branch of the graphic arts should be formed to cope with these problems. Such an organization should prove of immense help in aiding local or national groups with their individual members' problems.



FROM the Office of Production Management in Washington comes a warning that small firms will suffer most in coming months as a result of priority curbs. Speaking before a conference of officials, Peter R. Hehemkis, Jr., of the O.P.M., stated bluntly that the present program of production for defense might go so far as to wipe out certain small industries and the small companies which go to make them up. This

nation, says Mr. Hehemkis, has embarked upon our present gigantic defense program "in order that the foundations of democracy at home and abroad shall not be destroyed," but that these foundations shall be strengthened.

That these remarks from an official of the O.P.M. are disquieting, is to put it mildly. They carry a very ominous note, a note which to us sounds like a serious threat to that very democracy that we are girding our loins to defend. Wipe out small industry! Small companies will suffer most! But, says the official, these small companies must be helped, must be saved if possible—not because it is just and right to aid them, but to prevent them from becoming the disgruntled nucleus of what might develop later into a "fascist dictatorship in the United States."

For every large company in the United States, there are a hundred or more small ones. The reaction of these small firms, especially those in non-defense industries, to such openly expressed views is bound to engender hostility to the O.P.M. No small firm, faced with extinction or a government dole, is going to accept the situation lying down. They will fight back, even though the odds are all against them, to the detriment of the defense program. Priorities are of necessity essential, but unless they are enforced with care, and with intelligence based on an intimate knowledge of their requirements and complete effects, it may require eventually something akin to "a fascist dictatorship" to enforce them.

Already, there are rumblings in industry that priorities are being enforced to the accompaniment of too much hysteria and too little knowledge based on facts. If true, it is not very reassuring, and should be corrected. At the same time, it might not be amiss for the O.P.M. to gag some of its officials, particularly those who seem to specialize in scaring hell out of small industry.



LITHOGRAPHY HELPS SELL THE

A BRAND new market for lithography of the highest type was opened up last month by Standard Oil Company of California to tie in with the start of the current vacation season. The company has initiated a new summer sport featuring lithography among its customers in fifteen states, British Columbia, the Territory of Hawaii and the Territory of Alaska.

This new sport, which, two weeks after the first print was issued, apparently was taking the imagination of the travelling public like wildfire, is the collection of beautifully lithographed views of the West's most

picturesque points. Sixty of these lithographed scenic prints are being issued between May 28 and September 5, with production on a twelve-million basis, a new print being available every two weeks.

A motorist calling regularly at his favorite Standard station at home can pick up eight of the sixty different lithographic views in the course of the season. If he travels an average of fifty miles from home in that period he may expect to collect as many as thirty. If he travels an average of one hundred miles, distribution is so arranged that he may pick up the entire set of sixty views.

If his route is such that there are gaps in his collection, he may consult the company's schedule of distribution, which shows where and when each print is available, and acquire missing views during vacation trips. If he isn't making a vacation trip this year, he still has the alternative of writing to friends or relatives in the zones where his missing lithographs may be had, and ask them to collect the desired prints for him—incidentally giving the Standard Oil and the lithographs some of the best kind of advertising, and perhaps starting a new collector.

The sixty scenic lithographic prints

illustrate that many beauty spots and points of interest in the West calculated to be tempting to the holiday-minded. Since world travel is out of the question for most people this year, it may be expected that tens of thousands of summer vacationists in the United States and Canada will start exploring the North American Continent. In the words of the officials of Standard Oil: "Standard Scenic Views for the first time really show the West to Americans, not in black and white, not as an artist might conceive or interpret it, but in true, natural color as it actually is."

Presentation of the views "in true natural color" was a challenge to lithography. It was met successfully by Crocker-Union, of San Francisco, who lithographed the entire series. Everyone who has seen them agrees that the sixty prints represent an exceptionally beautiful job of lithography.

In producing the scenic prints, over six thousand scenic photographs judged to be exceptional, were assembled, grouped, and studied. The next, and not easy, task was to pick out the sixty most beautiful, most interesting and most suitable for the purpose in view: reproduction as



as dean of American scenic photographers; Fred Bond, a successful freelance color photographer; Mike Roberts, contributor to *Fortune*, *National Geographic*; Horace Bristol, *Life's* staff photographer; and Roy Atkeson, color specialist whose reputation grows apace.

Fidelity to subject and accuracy

deserts of the South to the country of the Royal Northwest Mounted Police of the North. Standard Oil officials and the lithographers agree in believing that "the series is unique in scope, size and color," that "there is nothing like it available anywhere."

The sixty color photographs are reproduced in full-color throughout with a 200-line half-tone screen employed. Some interesting problems were encountered in production. A special art-matte stock was perfected to mount the prints on; then it was found that no stock equipment suitable for the purpose existed, so nine specially designed tipping machines were developed and built expressly for mounting the prints on the mats. The actual size of the picture is $6\frac{1}{8} \times 9$; mounted it

Standard Oil Company of California launches campaign to make motorists conscious of West's beauty. Lithographed scenic prints produced by Crocker-Union do the trick.

WEST AS VACATION SPOT

Standard Scenic Views for the program in hand.

The sixty prints that were finally chosen were the work of photographers in all parts of the United States, both professional and amateur. In addition to the work of a Seattle housewife, a Tucson insurance salesman, a Denver dental goods manufacturer, a Royal Canadian Air Force Flying officer, the photographs included the work of the following well known professional men: Ivan Dmitri, staff color photographer, *Saturday Evening Post*; Ansel Adams, well known for his scenic art photography; John Kabel, regarded

and naturalness of color were among the determining points in making final selections and the sixty chosen views cover an area ranging from Texas to Hawaii and from the cactus

is $10\frac{3}{4} \times 13\frac{1}{4}$. Enormous amounts of paper stock and ink will go into the production of the twelve million prints. The estimate is seventeen carloads of paper, many pounds of lithographic inks. When completely made up, the Scenic Views will occupy space equivalent to between thirty-five and forty freight cars, or a total of some 250 tons of paper.

THE prints when received by the customers of Standard Oil are mounted for framing, protected by a flap of paper, entirely free of any sort of advertising. Under each
(Turn to page 55)





PROCESS LENSES

... their performance, requirements, purchase and care.

WITH photography as the nucleus of all photo-lithographic procedure, it is highly important that the photographic equipment be selected with as much consideration as would be accorded the purchase of an offset press. Since the results obtained from a process camera are determined more by the lens than any other feature of the camera, especial care must be given to the quality of the optical equipment.

The great variety of copy which is now handled by photo-lithography has placed great emphasis on the performance of the lens. While there are many lenses manufactured for very critical photographic purposes, the requirements of process photography are much more severe since copy work entails working at comparatively short distances between lens and copy. As a general rule a process camera is designed to permit up to 3:1 enlargement and 6:1 reduction. With an 18 inch lens, for example, the copy would never be further than 126 inches from the lens nor closer than 24 inches. Conversely the minimum distance between lens and film would be approximately 21 inches and maximum 72 inches. On the other hand, a lens

of 18 inch focal length for pictorial or commercial photography would operate at distances ranging between 18 and 36 inches from the film, whereas, the subject matter would be anywhere between 36 inches to infinity from the lens.

In addition to the matter of minimum and maximum distances between film and copy, there is also the factor of the size of the negative desired. In commercial photography an 11 x 14 negative is about the largest encountered; whereas process work may require line and halftone negatives 30 x 40 and even larger.

From the foregoing it is evident that the function of a process lens differs greatly from that of lenses for ordinary purposes. Lens manufacturers, therefore, have taken these requirements into consideration and have developed a number of lenses that are especially corrected for the scale of reduction and enlargement at which they are generally used.

The principal requirements of a

process lens may be summarized as follows:

(a) The design of the lens should be such that it will cover a flat field and give perfect coverage in the corners as well as in the center of the field. A critical definition of the image should be maintained uniformly over the entire image area without the need for using the smallest lens apertures. In addition, it is desirable that the diagonal of the largest rectangle critically covered at same size be slightly in excess of the inherent focal length of the lens.

(b) In order to maintain the maximum sharpness and clarity of minute detail, the lens should possess a reasonably high resolving power.

(c) Astigmatism must be completely overcome so that vertical and horizontal lines will be brought to critical sharpness simultaneously over the entire image area.

(d) Coma, flare, curvilinear and other distortions must be eliminated.

(e) The design of the lens should

Maximum and Minimum Camera Distances

Focal Length of Lens

Times of Enlargement and Reduction	10"	12"	18"	24"	30"	36"	48"
1	20	24	36	48	60	72	96
	20	24	36	48	60	72	96
2	30	36	54	72	90	108	144
	15	18	27	36	45	54	72
3	40	48	72	96	120	144	192
	13.3	16	24	32	40	48	64
4	50	60	90	120	150	180	240
	12.5	15	22.5	30	37.5	45	60
5	60	72	108	144	180	216	288
	12	14.4	21.6	28.8	36	42.2	57.6
6	70	84	126	168	210	252	336
	11.6	14	21	28	35	42	56
7	80	96	144	192	240	288	384
	11.5	13.7	20.6	27.4	34.3	41.2	54.9
8	90	108	162	216	270	324	432
	11.25	13.5	20.2	27	33.75	40.5	54
9	100	120	180	240	300	360	480
	11.2	13.3	20	26.7	33.3	40	53.3
10	110	132	198	264	330	396	528
	11	13.2	19.8	26.4	33	39.6	52.8

The Table is used as follows:—Locate the column corresponding to the focal length of the lens. The square in that column opposite the scale of reproduction desired indicates the major and minor conjugate foci.

For reductions the smaller of the two numbers designates the distance between lens and film while the larger number is the distance between lens and copy.

For enlargements the smaller number will be the distance between lens and copy while the larger number denotes the separation between lens and film.

By adding the two numbers together the total distance between film and copy is obtained.

permit uniform illumination from the center of the negative to the outer edges.

(f) A high degree of color correction is necessary so that rays of all colors are brought to a focus in the same plane.

THE term "color corrected" as applied to a photographic objective indicates the elimination of chromatic aberration. Due to the difference in the refraction of the various colored light rays of which all white light is composed, the vari-

ous colored rays are brought to different focal points in a simple lens. As a result, with this type of lens, it is impossible to obtain a critically sharp image of colored subjects even if the negative record is black and white. In correcting a lens for color aberration, positive and negative elements which have the same dispersion but different refraction, are combined. In this way the separation of the component rays is prevented and all rays are refracted as a unit. Unfortunately it is not possible to correct for the entire visible spectrum at one

time, so in most color corrected lenses the correction is generally limited to the two principal spectral bands.

It has been established that the coincidence of the yellow-green image which corresponds to the color of maximum visual effect with that of the blue image, which is the color of greatest actinic or photographic effect, will produce color correction to satisfy most photographic requirements. Lenses which are color corrected for the yellow-green and blue-violet regions are termed "achro-

matic lenses." An achromatic process lens can be used satisfactorily for black and white negative work, line and halftone. Single record negatives of colored copy can be produced with or without the use of filters.

For three- and four-color process work it is necessary to correct for the three primary color bands so that each of the separation negatives will be equally sharp and of the same size. Lenses corrected for three colors are called apochromatic. In this type of lens the inclusion of an additional element to correct for the red rays in conjunction with the correction for the blue-violet and yellow-green bands, combines to bring all the rays of the visible spectrum to a common focal point.

A simple guide to the correct choice between an achromatic and apochromatic lens is as follows:

For all ordinary black and white negative work—either line or halftone—an achromatic lens will prove entirely satisfactory. Whenever it is necessary to make color separations in which the images must subsequently coincide, an apochromatic lens is necessary.

Lenses of reputable make will be corrected for the many aberrations already mentioned. With reasonable care they will last indefinitely, but there are certain simple precautions necessary which may be overlooked by the fastidious worker. Optical glass is considerably softer than ordinary glass and too much cleaning and rubbing may result in destroying the fine polish of the lens surface and give rise to minute scratches which, being accumulative, will in time interfere with the performance of the lens. It is far better to minimize the amount of cleaning necessary by avoiding touching the glass surface or by avoiding accumulation of a layer of dust and dirt. When not in use, the lens should be protected both front and back by a lens cap. The slot for the waterhouse stop should always be kept closed except when in use to prevent dirt and other foreign particles from accumulating within the lens barrel. When taking a lens apart it should be done over a table, the top of which is well cushioned with felt, flannel, or other

Lenses Designed for Process Photography

Bausch & Lomb Process Anastigmat*
Beck Process Isostigmat
Boyer Apo-Saphir
Cooke Apo-Planital
Dallmeyer Process Anastigmat
Goerz Artar Apochromat*
Goerz Gotar*
Eastman Kodak Ektar*
Laack Repro Polyxeutar
Hugo Meyer Process Plasmat
Rodenstock Apo-Process Eurynar
Ross Apo-Process Xpres
Steinheil Apo-Process Orthostigmat
Steinheil Process Orthostigmat
Taylor Hobson Cooke Apo-Process
Taylor Hobson Cooke Process
Voigtlander Apo-Collinear
Watson Holostigmat
Wollensak Process Velostigmat*
Wray Process Lustrar
Zeiss Planar
Zeiss Apo-Planar
Zeiss Apo-Tessar

Lenses followed by an asterisk indicate domestic manufacture.

foreign lens imports, lithographers may find themselves inconvenienced by a lens shortage. This, naturally, will give rise to increased activity in the used lens market. As an aid toward recognizing a process lens, the list opposite is offered. This list represents a survey of literature and other data on all known lenses specifically designed for process work. While many of the names may prove strange, most of them are lenses of established reputation recognized by process workers in Europe.

THE probable lens shortage may also force lithographers to accept a lens of greater or shorter focal length than desired. The various camera movements, i. e., the copy board and lens board, are limited to the design of the camera. As a general rule a camera will give maximum reduction and enlargement ratios with a lens of a certain focal length. When a lens of greater or lesser focal length is used, the camera movements may prove to have limiting factors. This may be determined by simple measurements taken on the camera itself. Rack the lens board to the back and measure the minimum distance that can be obtained. Then rack the lens board in the opposite direction and measure the maximum distance obtainable between lens board and film. Move the copy board to the extreme end of the track and measure the greatest distance obtainable between copy board and film. By reference to the chart on page 21 it can be readily ascertained what degree of reduction and enlargement will be possible on your camera with lenses of the focal lengths listed.

Do not buy a used lens unless you first have an opportunity to test it under actual working conditions. Most reputable dealers will submit a lens for approval on a ten-day free trial basis. If you are offered a lens by a total stranger be cautious for, although a lens may contain the name of a reputable manufacturer, the substitution of inferior elements mounted in a bona fide barrel of a known lens was a prevalent practice many years ago. Such a lens, while it may seem like a great bargain, will

soft thick cloth. It is advisable to avoid storage of a lens in extremely hot and humid conditions since this may cause the Canada Balsam cement to melt and thus separate the various elements in the lens. It is advisable not to store corrosive chemicals in the vicinity of the gallery. The fumes from these chemicals may attack the glass. When cleaning a lens, do not use alcohol, ammonia or any other strong cleansing agent. The use of lens cleaner and lens tissue will prove economical in the long run. Before cleaning the surface with cloth or lens tissue, the surface dirt should be first brushed off with a soft camel's hair brush.

In view of the many photographic applications in manufacturing processes, in addition to the need for lenses for map reproduction, etc., a large percentage of the output of domestic lens manufacturers is being claimed by defense industries. In connection with the curtailment of

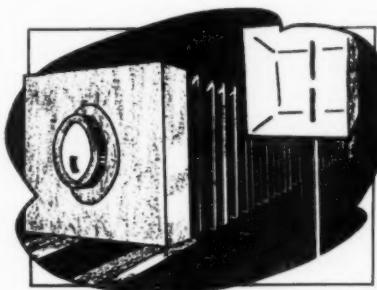
prove very costly in view of a low negative quality and a high film waste.

A performance test will be indicative of the negative quality that may be expected from a used lens. This test should embrace both line and halftone negatives at various degrees of reduction and enlargement and at various lens openings. In some cases a lens will show perfect negative quality when focussed at certain sizes and with certain apertures. This same lens may show certain aberrations with large apertures and at certain sizes. In order to show how well a lens is corrected, it is obvious that a comprehensive test is necessary. If the negatives show any defects, it is advisable to make specific tests in order to isolate the particular aberration.

A lens may be tested for its color correction by a simple and accurate method which employs the process camera itself for the test. A photographic plate is fully exposed to light and developed until it is completely black. After the usual processing manipulations, the plate is dried and, when dry, a narrow transparent slit is scratched in the blackened emulsion. To this plate are then fastened on the glass side small strips of the tri-color gelatin filters. The transparent slit should be divided into 5 parts—the first of which may be left blank. Over the 2nd and 5th sections is fastened the red filter. In the 3rd and 4th areas are fastened the green and blue filters respectively. The plate is then placed in the positive holder of the camera with the emulsion facing the lens. The camera should be focussed at same sizes with great accuracy. The camera may then be loaded with a panchromatic plate of a size to cover the length of the slit and an exposure given just enough to make a good record without any widening of the slit which would be caused by irradiation due to overexposure. After the negative has been processed and dried, the plate is viewed on an opaquing or retouching table. A ruler or any other accurate straight edge is applied against the two images of the red slits. If the white, green and blue

images are in perfect line with the red images, the lens is fully color corrected. On the other hand, should the blue and green be in line with each other, but out of line with the red images, the lens is an achromat and only partially color corrected. It is advisable to repeat this test and this time move the test plate off center so that the image will be formed as far as possible from the center of the plate. This is to determine whether the correction of the lens extends to the marginal rays. If the second test is in accord with the first one, the lens may be considered very satisfactory. Should the second test show a difference, it indicates that the correction is limited to a certain area within the center of the image area.

In the event that the camera has no provision for transparency work, this test may also be made by photographing a dull black paper upon which has been ruled a very thin white line. In this case the filters are inserted in their receptacle in the lens and during the series of exposures only one-fifth of the white line is exposed each time, the remaining four-fifths being covered by black velvet or other highly light-absorbent material.



It should be noted that in connection with the second test, only the highest quality filters should be used. Otherwise we may introduce a displacement of the image due to filter aberrations.

If a negative white from a routine black and white test shows more than one image, examine the barrel of the lens carefully. If the mount shows any dents, it may be an indication that the lens has been dropped. When a lens is dropped, the edges of the lens elements may chip or fracture slightly which in many cases

may be of little consequence. A less noticeable but more serious injury caused by dropping a lens may be a shifting of the elements of the lens or, by reason of a distortion of the barrel, certain elements may be squeezed together. This will cause a displacement of the axial rays and result in a duplicity of images. A simple test for this fault can be made by focussing on a small bright object such as a small white circle in a black field. The lens should be rotated in its flange and if the observer notes any movement of the bright spot on the ground glass, this may be an indication of lack of centering. If the lens shows chips or fractures at the outer edges, several trial exposures at maximum aperture on a fairly large size film should be made. The same subject should also be photographed at slightly smaller apertures. If the negatives at different apertures show any serious discrepancy, it may be due to the interference by the chips or fractures with the marginal rays.

If the negatives from the performance test show no perceptible defect but seem to lack brilliance and utmost sharpness, this may be caused by scratches on the lens surface. Cleaning a lens with dirty or coarse cloth will produce countless minute scratches imbedded in the surface of the comparatively soft glass. If not severe, these scratches will merely retard a certain portion of the light and necessitate an increase in exposure time. If they are acute, however, the scratches may disperse and otherwise distort the light rays entering the lens. Thus the quality of line and particularly halftone will be seriously impaired. It is a wise precaution to send a used lens to the original manufacturer for a polishing of the lens surfaces, whether or not its surfaces show scratches.

SHOULD a lens need excessively long exposures in order to produce good negatives, it may in many cases be attributed to a discoloration of the cement used in affixing the various elements together. If of a minor nature, this discoloration has no more effect than to prolong the exposure time. If very severe, the

(Turn to page 55)

HIGHLIGHTS of the

OF outstanding importance at the Lithographers National Association Convention at White Sulphur Springs in May was the technical discussion on production processes conducted by a group of six men, all specialists in the various phases of lithographic manufacture. These men, Robert J. Butler, of Fuchs & Lang Mfg. Co., representing the ink industry and chairman of the session; A. Stull Harris, Harris-Seybold-Potter Co., representing the machinery industry; Victor W. Hurst, Eastman Kodak Co., representing the photographic materials industry; Robert W. Reed, representing the Lithographic Technical Foundation; B. L. Wehmhoff, representing the paper industry and T. S. Hiller, instructor in platemaking at the New York School of Printing, discussed recent progress in their respective fields and answered many questions submitted from the floor by those at the convention.

In view of the defense emergency and the sharp focus it has brought to bear on materials and methods in the lithographic industry, interest was keen. The following is a condensed report of the meeting. A full verbatim report will be released soon, it is announced, by the Lithographers National Association.

VICTOR W. HURST, Eastman Kodak Co. (Photography). We believe the most important developments in photography in the past ten years are high-contrast films, dot-etching and color film. . . . Within the past year there has been developed a film base which we call uniaxial, which means it stretches and shrinks in all directions equally. We do not guarantee such film to hold the exact size indefinitely. . . . The uniaxial film will hold register nearly as closely as plates when the work is done in an air conditioned plant. However, when one makes two separation negatives today and two tomorrow, and if air condition is different each day, he may get two different sizes.

Q.: In the reproduction of a color transparency, is it possible to duplicate a job from a

A feature of the Lithographers National Association Convention at White Sulphur Springs in May was the discussion of lithographic techniques, reported herewith in part.

transparency that has been used by another concern?

Mr. Hurst: If the technique used in reproducing the transparency is correct in New York, it can also be used to reproduce it in San Francisco, New Orleans, Labrador, or wherever.

Q.: Is there a loss of color value in the transparency after being used one or more times for reproduction?

Mr. Hurst: We've tried to educate lithographers to the fact that they can't compare a transparency with what will be reproduced on the printed page. In viewing the transparency the eye perceives more detail than can be detected in a photograph and more than can be printed by photo-mechanical means. In addition, transparencies present the problem of comparatively high contrast. There are a number of ways of overcoming this latter characteristic. In the reproduction of a transparency we recommend that as far as possible the indirect method be used. That is, continuous tone separations from which, for deep-etch, screen positives are made. If screen negatives are required, continuous tone positives can be made by either contact or projection, and from these positives the final screen negatives are produced. In this way we step down the contrast in making the continuous tone negatives as well as in making the positives and final screen negatives.

Q.: With the improvements that have been made in emulsions, hasn't the indirect process been somewhat replaced so that now better half-tone separation negatives can be produced direct from the Kodachrome and dot etching done on these negatives, rather than retouching on continuous tone negatives and positives and the final halftone?

Mr. Hurst: That is correct to a certain extent, but still the improved emulsions do not give what you can get by the indirect process from a transparency such as Kodachrome.

Q.: Some lithographers have used indirect methods of reproducing Kodachrome which involved either making wash-off reliefs or carbro prints and then making separations from them. Is there any advantage in this?

Mr. Hurst: Yes, if you take a Kodachrome and show it to a prospective customer he will expect that you will reproduce his job just like that, which can't be done. But if you take a Kodachrome

and then make a wash-off relief print or a carbro print and present it to the customer, you are showing him something that you can match. You can lay the relief or carbro print alongside the printed job and have something that will be a fair comparison.

Q.: There have been methods developed for accurately measuring the density and tone range of an original that is to be reproduced, and measuring the density and tone range of a reproduction in terms of negatives and positives with the idea of controlling each step along the line so that the amount of art work which must be done becomes known, and is reduced to a minimum. Do you think the industry is going to come to the use of densitometers for this purpose?

Mr. Hurst: If any of you men here representing any plant that is doing color work are not using a densitometer you are just one of a very few, and I would recommend that when you go back to your plants the first thing you take up with your photographic department is the purchase of a densitometer. We understand from some of the largest plants that the densitometer has saved at least 50% of color correction. Also, I don't see how any photo-mechanical plant doing black and white or color work in the future can get along without a densitometer.

Q.: How much technical training does a man need in order to use a densitometer?

Mr. Hurst: Any photographer, with average training, can use the densitometer successfully. I would like to say here that it is our feeling that more members of lithographic plants should become familiar with photography. Too often the management depends entirely on operators for decisions in photographic problems. If photography is important in your business today, it is going to become even more so in the future.

THEODORE S. HILLER, New York School of Printing (Platemaking). In judging the quality of a negative from which plates are to be made, you must consider first the process to be used to produce the plate. Generally speaking, for long runs we consider deep-etched plates superior to aluminized. There are advantages to deep-etch because of the type of image, which as you know is on the level of the pit or valley of the grain of the plate. It is considered, therefore, to be imbedded in the plate. The image, of course, is not below the surface to any great extent, but below

L.N.A. Technical Session

the general level of the peaks of the grain. It is considered to be fixed to the plate and, therefore, stronger than the albumin image which lies on the top of the grain. The deep-etch image is also considered to be superior to the albumin image because it can carry a greater amount of detail. The tonal gradations or tone values of the image can be carried better with a deep-etch plate because, first of all, the dot is a better likeness of the dot that is found on the positive. Secondly, that dot will remain that size and that shape for a longer time. It does not grow as in the case of an albumin image. Furthermore, it will accept and transfer ink better than an albumin image or an albumin dot, and it is less easily broken down.

Q.: You are speaking of albumin plates, the albumin for which has come from China?

Mr. Hiller: Yes, although we are now producing some domestic albumin. There has been some resort to albumin from duck eggs instead of chicken eggs. However, it is not considered quite satisfactory. There is undoubtedly going to be a problem of getting sufficient albumin in the future. There has been some use of substitute colloids for albumin up to now. Glue and casein have been used. Also some of the alcohols have been resorted to.

Q.: How can we make a printed dot the same size as it is on the positive? Our proofs are all right, but when we put the plate on the press we get a growth or increase of the tone as much as 50%. We can't increase our exposure enough to reduce the dot size so that when we get the plate on press the impressions correspond to the positive. What causes this difficulty?

Mr. Hiller: If we go back one step to the positive that is used to produce that plate and the corresponding steps that are taken in the process to produce the image on the plate, we have a number of steps, any one of which may be a factor entering into the formation of the dot. The transferred proof has probably grown in size because of the improper preparation of the coating of the plate. Also, the printing pressure, amount of ink and the paper, when that proof is pulled, are all factors.

Q.: Often these plates of which I speak are just as good when you take them off the press as they were to start with, but still they print heavier on the press and the actual dot has not been changed, so it must be some factor in press operation that is different from the pulling of a hand proof. How are we to make the proof sheets show what we are going to get on press?

A. STULL HARRIS, Harris-Seybold-Potter Co. (Pressroom Equipment). We have made a number of experiments comparing the size of a dot on a halftone negative with the size of the dot on the plate. The growth between the negative and the plate, using a positive and albumin coating, seems to be approximately 20%. We also have made experiments with deep-etch using coatings of different densities and it has been found generally that the thinner the deep-etch coating, the nearer it will reproduce to actual size. When it is thicker, the dot

decreases in size. The nearer the dot size can be kept correct, of course, the better, because without a doubt there is an increase in the size of the dot from the plate to the printed sheet. I think blankets have a lot to do with it and, of course, the amount of pressure used and the care with which the job is started. I hear a great many lithographers say that there isn't any one type of blanket that is correct for all types of work. In other words, the type of blanket should vary with the quantity of ink used on the job, the type of ink, and the surface of paper being printed. Of course, a printing press manufacturer is striving to reproduce the dot the same size as it is on the plate. The use of bearers on the plate and rubber cylinder was the first step in maintaining dot size. The elimination of register racks and the use of a back lash gear all the way around the cylinder helped to hold it from running ahead, thus eliminating the tail on the dot and making it print nearer to plate size.

Mr. Hiller: The growth of the dot on the plate, while that plate is on the press, is definitely dependent on the original dot, put there from the negative by the exposure. The exposure which produces the image, the thickness of the coating, the finishing operation—the development of the image and desensitizing of the background, making it water-receptive—have much to

do with the quality of the dot. The thicker the coating on the deep-etched plate, the greater the possibility of some enlargement of the dot. The stencil on a thick coating cannot be hardened through to the metal and a consequent slight undermining causes an enlargement of the printing dot.

Q.: In some experiments made not long ago to determine what effect the light had on the size of the dot, tests were made in which the exposure of a negative in making the plate was timed, and these results compared with tests in which the amount of light used in making the exposure was measured. Where light was measured during the exposure rather than timed, the resulting images were decidedly better, so from that it appears that it is the amount of light that you use, not the time, which is the controlling factor. Do you find that to be the case?

Mr. Hiller: Definitely so, and most of our photo-composers today are equipped with devices capable of controlling the amount of electricity consumed by the arc lamps. The Totalux, for example, is an improvement in this direction. When we speak of exposure we are concerned with the intensity of illumination. That depends on the amount of illumination given off by the arc and on the distance between that arc and the printing plate. Fluctuations in electrical current due to the use of other machinery on the line, which draws from that supply which you use for illu-

JUST as we went to press a letter was issued by the Office of Production Management, Division of Priorities, at Washington, announcing a priority rating of B-3 on stainless steel for lithographic plates. Most of the lithographic trade associations, we understand, received the announcement. It bore the signature of H. LeRoy Whitney, Staff Expert, Iron and Steel Branch, Minerals and Metals Group of the O.P.M., and follows, in part:

"In view of the fact that by using stainless steel lithographic plates only small amounts of nickel and chrome will be used and a great saving in the use of zinc will be the result, this office requests that you advise all of your members that they may use a rating of B-3 to obtain necessary stainless steel lithographic plates.

"We presume that all of the lithographers will purchase these plates from warehouses and we request that they do so, in which event it will be necessary for them to certify to the warehouse from whom they purchase the purpose for which the plates will be used, and that this office has instructed them that they may purchase under a B-3.

"Within a short time standard certificate forms will be issued by this office. At that time we will send you a supply for your members.

"We are inclosing herewith Lists #1 and #2 showing stainless steel in stock in various warehouses here in the United States so that each lithographer will know where he can secure these plates. . . ."

We suggest that lithographers interested in obtaining further details of this announcement get in touch with their trade associations. The general consensus seems to be that while the announcement is of interest, in view of the B-3 rating the lithographic situation will not be greatly ameliorated.

minating and producing the exposure, are important. There is a definite fluctuation in the intensity of light and in order to overcome that fluctuation more is needed than just a timer or stop watch to determine just what the exposure should be.

ROBERT F. REED (Lithographic Technical Foundation). I would like to add that variations in line voltage caused by turning on and off other machinery aren't the only things that cause fluctuations in the arc lamp. The carbon feeding mechanism on the arc lamp is far from perfect and the carbons themselves are far from uniform. They burn unevenly. We found variations of as much as 50% in the light intensity during one cycle of grips on the carbons, and in exposure intervals of one minute we found variations of total light as much as 20 to 25 per cent. In photo-composing, reproducing the same image time and time again on a plate, these are serious differences.

Q.: Coming back again to the question of growth of a dot, am I wrong in assuming that paper is also a factor?

Mr. Harris: Dot sizes on the press may be increased in several ways. One, by excess printing pressure between rubber and impression cylinders and another which in a great many ways is traceable to the condition of the paper, causing a double dot. This is caused by paper in a wavy condition prematurely striking the blanket before actual printing contact is made. Another cause may be that the paper doesn't stretch uniformly and a double dot condition would be apparent on multi-color presses. Of course, any press that doesn't register between units will show double dots or enlarged dots, so I would say there are three things to check when the size of the dot doesn't conform to the printing plate, namely, printing pressure, condition of paper, and the registration of multi-color presses between units.

Q.: There is quite a controversy on regarding regraining, particularly deep-etch. We all know the condition of metal in the industry today and I was wondering what could be done from a mechanical standpoint in reproducing or permitting the re-use of a deep-etched plate. I understand that due to the depth of the etch it doesn't permit perfect regraining because the marble is always working in the recessed dot of the plate, and it continuously wears down in the manner in which the plate is etched.

Mr. Hiller: Of course, in order to produce a cleanly grained plate, one that is free of any ink receptiveness, it is necessary to regrain the metal away which is higher than the base of the image, thereby losing that metal and producing a new grain or tooth on the total area of the plate. With due regard for our present shortage of metals, there are several suggestions that can be made with relation to the production of plates in the platemaking department. First of all, in the production of deep-etch plates for runs of twenty to forty thousand, it is not necessary to produce the depth of etch in the plate that we have been producing. It is well not to deep-etch for such a long period of time as we have been doing. One and a half to two minutes' time is a good average deep-etching time. In fact, if your plate is properly developed and washed off, the whole operation of deep-etching can be eliminated, but the image must be clean and properly developed and the developer must be properly washed out. We usually use water-free alcohol or industrial alcohols which will remove any of the developing solution, then lay in the image grounds on this clean image and cover it with the deep-etching ink. For runs of twenty-five to fifty thousand, a deep-etch plate made under these conditions should be satisfactory and

give much longer plate life.

There are one or two other suggestions for plate conservation. For example, graining operations are carried on for too long a period of time as a rule. The abrasives used are oftentimes wrongly applied. It is much better to start off with a fine but harder abrasive, one that has better cutting qualities, rather than to start off with coarser abrasives and end up with finer materials. If we use a hard abrasive, as aluminum oxide #240, for example, graining time will be cut and we will find that we can produce satisfactory grains free from deep scratches and with less loss of metal. Then we must consider the use of acids to clean the plate, such as those we term counter-etch, in preparing the plate for the acceptance of the coating solution. In many shops nitric acid or hydrochloric acid are used. Both are very corrosive acids on metals, more so on zinc than on aluminum. Substitute a weak acid such as glacial acetic acid in milder solutions. We are accustomed to formulas of 6½ to 8 ounces of glacial acid to the gallon as a counter-acid. You can substitute for that a weaker solution, 4 ounces to the gallon of water, although it requires a half minute to a minute longer to react and a little more scrubbing, but there is not as much loss of metal due to corrosion.

FOLLOWING the discussion, the meeting was thrown open to questions submitted from the floor. The following are a few of the questions and answers:

Q.: What are the most recent fillers to develop opacity in thin paper?

MR. WHEMHOFF (Paper Industry): The work on fillers, that is, the commonly

used fillers such as clay, has been along the line of controlling particle size to increase opacity. Titanium is one of the most opaque fillers that can be used and that is used to some extent, but, unfortunately, the cost of it eliminates the possibility of its being used in very high percentages. The only other filler that has been developed that shows an increased opacity in paper is calcium sulfite.

Q.: What methods have been most successful in reducing the amount of color correcting on reproduction work?

Mr. Hurst: Masking has been most successful. Of course, dot etching is resorted to, and you can do almost anything you want to with dot etching, but that is expensive. We think the development of masking methods is going to keep the process photographic and cut out hand-work, which means economy.

Q.: How many times can the surface of an aluminum plate be used with the deep-etch process?

Mr. Hiller: It depends upon the depth to which the image has been corroded into the plate. It depends, too, upon the thickness of the metal that you start with. With an .018 plate you don't want to get down to an extremely thin plate. Perhaps the maximum number of times an .018 plate can be used would be five times.

Mr. Reed: As a usual thing, it is not the thinness or thickness of the plate that determines how long it can be used, but whether or not you can put it on the press time and again without pulling out the edges. We have run plates fifteen times on the press and found them to go down only .003 of an inch in thickness due to regraining. It is whether or not the plates will hold at the edges and whether we can hold them in the clamps. A good deal could be done in the conservation of aluminum by the pressmen just through care in putting the tension on the plate.

THE color process print, "View in Lake Cliff Park, Dallas," opposite, which was lithographed by Robert Wilmans, Dallas, is the result of the company's efforts to produce pleasing color work at a price small advertisers can afford to pay, and not be penalized with a lot of extra charges.

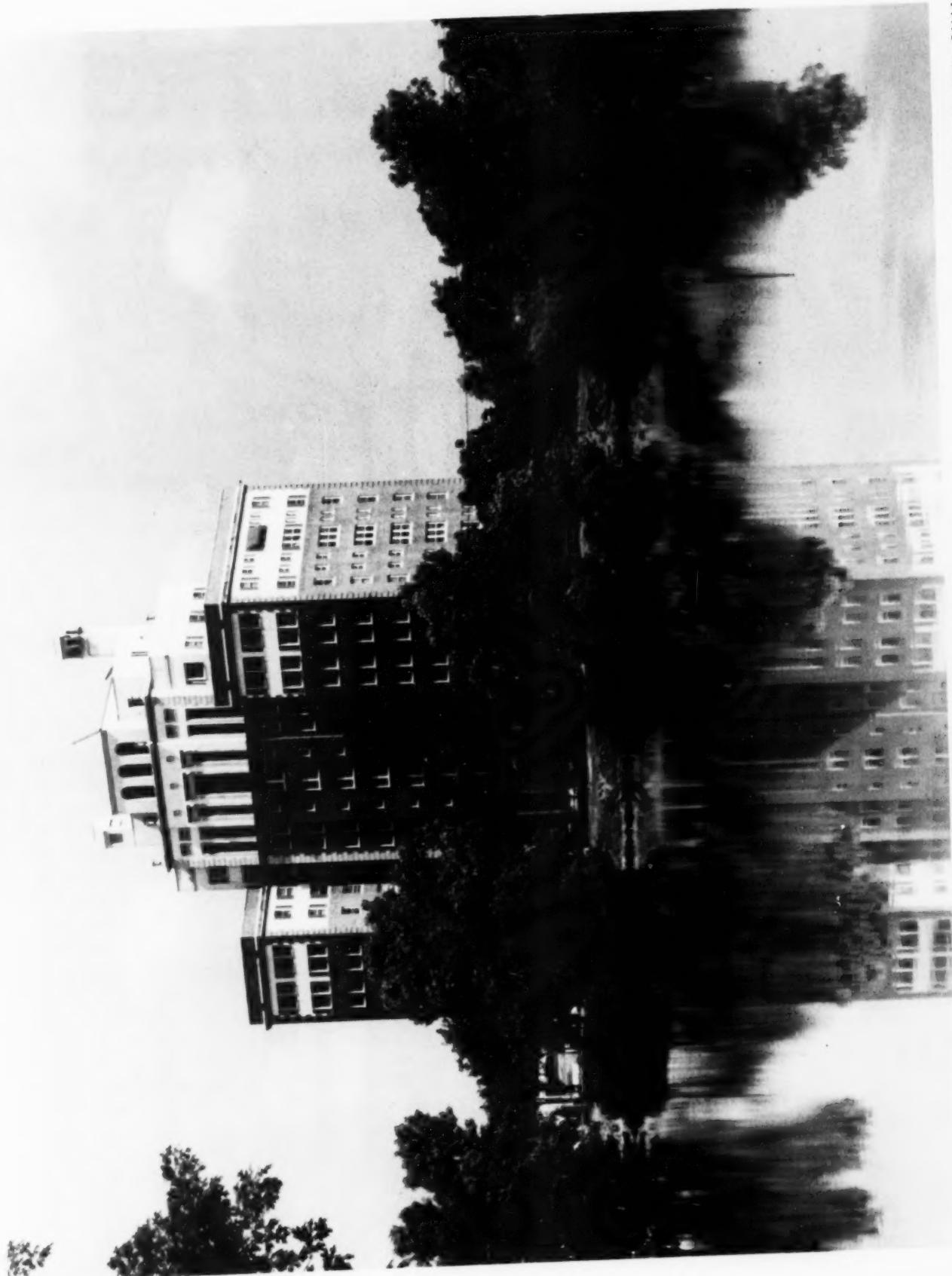
The company uses a Lerochrome one-shot color camera in conjunction with a densitometer manufactured by the same company. The densitometer is used to check each step of the process from camera plates to press negatives. There is no color print made before going to press. They make 8" x 10" black and white bromide enlargements from each of the glass camera plates. These bromide prints go directly to the process camera operator who makes standard halftone negatives of desired size to exact register on offset film. From these three halftone negatives four albumen press plates on zinc (not deep etched) are made. Ordinary stock process inks are used without toning, mixing or doping. The paper is regular offset enamel. The press is an M model Webendorfer offset jobber equipped with infra-red lamps over the delivery pile to facilitate drying and to prevent offsetting.

Up to the present time the work in color process has been purely experimental for the purpose of arriving at a simple, sure and direct method of producing suitable color process pictures without retouching, dot etching or other hand work.

The company is encouraged with its progress, as well it should be.

The concern was established by Robert Wilmans, Sr., forty years ago. While he is at his desk daily, it is now being operated by Robert Wilmans, Jr.

VIEW IN LAKE CLIFF PARK - DALLAS



PHOTOGRAPHED AND LITHOGRAPHED BY
ROBERT WILMANS, PRINTER, DALLAS, TEXAS

DATA:

Camera, $3\frac{1}{4}'' \times 4\frac{1}{4}''$ Lerochrome Oneshot Color
Outdoor Model.

Lens, Hugo Meyer Aristostigmat f:4.5 $8\frac{1}{4}''$,
Plates, Super Panachro Press (Eastman).

Exposure, 1-25th second at f11 9:30 A.M., hazy sun.
Tray development in D76—65°F.

Printing halftones made from projected bromide positives
of original camera plates, no retouching or masking.
Lithographed on Webendorfer offset jobber
Photography, development, plate making and litho-
graphing all performed by members of the organization
of **Robert Wilmans, Printer, Dallas**

Data on this side imprinted on letterpress.

WETTING AGENTS

. . . their advantages in
the lithographic process
are specific and many.

WATER performs one of the most important functions in the lithographic process. Not only is it a solvent for the various chemicals, colloids, etc., so necessary in the preparation of plates, but it also serves as a vehicle for distributing these chemical preparations over the surface of the plate. In addition, since water is grease-repellent, it makes possible the non-inking areas on the plate. It further acts as a protector by interposing itself between the oxidizable surface of the plate and the air, thus preventing the non-printing areas from becoming ink receptive.

It is quite obvious, therefore, that water contributes a number of indispensable properties to the process. There are certain natural limitations, however, which in many cases retard or prevent the water from acting in the desired manner. Before dealing with these limitations in detail, it would perhaps be best to consider the physical characteristics of water.

You are aware, of course, that water is a compound composed of two parts of hydrogen and one part oxygen. In the formation of a compound, the atoms of the combining elements unite to form molecules. In stable compounds, such as water, there is a constant tension among the molecules to adhere to one another. The ability to distribute these molecules over a given surface depends entirely upon the degree of attraction of the molecules for one another. In other words, the greater the inherent attraction of these molecules for one another, the harder it will be to extend the surface area.

This can be illustrated very simply by observing the action of water sprayed, for instance, on the leaf of some plant. Instead of spreading out as a thin film over the entire area of the leaf, the water has a tendency to collect into small drops forming almost perfect spheres. This is known as surface tension and is common to all liquids. Ethyl alcohol, for instance, can be distributed as a thin film with much greater ease than water simply because it has a lower surface tension. Glacial acetic acid, on the other hand, has a higher molecular attraction than water and because of the consequent high surface tension, it will offer greater difficulty in extending its surface area than water.

To sum up, the greater the attraction of the molecules of a liquid for one another, the greater the surface tension, and consequently more difficulty will be experienced in distributing the liquid evenly over a given area. When dealing with the distribution of a liquid over the surface of a solid with both in intimate contact, surface tension is then considered as inter-facial tension. Wetting is the phenomenon of a liquid and a solid coming into such intimate contact that there is no intervening layer between liquid and solid. Specifically, the lower the interfacial tension, the greater is the penetration of the liquid. In other

words, with a low inter-facial tension, the wetting ability will be expedited. Aside from the natural repellency of a liquid and a solid, there are certain other factors involved. In the case of a zinc plate, for instance, a very thin layer of grease, scum, etc., which may be present as a microscopic film would have a considerable retarding action to the wetting power of a liquid, such as a counter-etch.

From some of the difficulties often encountered, one would conclude that any method or material that would increase the wetting power of water would be of great help indeed. There are numerous common substances which will enhance the wetting ability of water. Among them are ethyl alcohol and soap. Unfortunately soap cannot be successfully used in conjunction with lithographic chemicals and metals. In the case of zinc, for instance, soap may react with the zinc to create metallic soap which is insoluble and which would remain on the zinc surface and render the entire plate receptive to grease. In addition, soap may combine with certain chemicals in plate-making solutions and produce decidedly unwanted reactions. Other manufacturing processes have long had a great need for a substance which would enhance the wetting power of water. This need has prompted the chemist to evolve

chemicals which have the power to increase the penetration of water and yet not interfere with other chemicals which may be dissolved in the water. These substances have been termed "wetting agents" and their advantages in the lithographic and allied processes are many.

A recent compilation by F. J. Antwerpen¹ indicates a list of 270 wetting agents used in various industrial processes. There can be no doubt that among this vast number there are many which will expedite the various lithographic manipulations. Among some of the more well-known products are the following:

Aerosol (American Cyanamid & Chemical Corporation)
Duponol (E. I. du Pont de Nemours & Co., Inc.)
Nacconol (National Aniline & Chemical Co., Inc.)
Penetrol (Beacon Co.)
Ultrawet (Atlantic Refining Co.)
Warcosol (Warwick Chemical Co.)
Wetonite (Industrial Chemical Products Co.)

On the basis of both theoretical and practical usage, a wetting agent in conjunction with the standard lithographic solutions is indicated in the following applications:

- (a) as a detergent in the preliminary cleaning of a plate.
- (b) to facilitate a uniform action of the cleaning etch (counter-etch).
- (c) in the sensitizing solutions to promote a uniform coating free of air bells.
- (d) as a penetrant in the development of albumin and deep-etch coatings.
- (e) in the etch to insure a more intimate contact between etching solution and metal.
- (f) in the graining compounds as a detergent and penetrant for the removal of the old image and to promote an intimate contact between abrasive and metal surface.

It is also suggested that a wetting agent added to the fountain solution will insure a uniform distribution of moisture and may possibly alleviate some of the dampening difficulties.

¹ Industrial & Engineering Chemistry, Jan. 1941, pp. 16, 17, 18, 19, 20, 21, 22.

This application, however, will need careful experimentation since a wetting agent also possesses emulsifying properties. The emulsifying action would cause water and grease to mix and would, therefore, defeat the very purpose for which the wetting agent is intended. This particular application, however, is in the realm of possibility and offers enough advantages to justify careful experimentation. In all likelihood, it will be necessary to use agents of various characteristics for optimum results in each of the suggested applications.

In an article on platemaking, E. Bruyning suggests the use of Aerosol in connection with the acetic acid counter-etch, (*MODERN LITHOGRAPHY*, June 1940, pp. 43, 44, 45, 67). The following is the recommended formula:

Acetic Acid (glacial)	6 ounces
Water	1 gallon
Aerosol (O.S. 100%)	60 grains

WETTING agents have been employed for some time in many of the industries allied with printing. Wetting agents are added to certain types of paper to increase the absorbency and in many cases to increase the softness and flexibility of the paper fibres. In gravure inks, a wetting agent will increase the receptivity of the gravure cylinder cells for the ink and also a greater attraction of the ink for the paper. In textile printing, these agents have contributed to a marked degree to the increased brilliancy of the colors due to a quicker and more uniform penetration of the dyes into the fabrics. A number of uses for wetting agents have been found in the manufacture of printing inks. Such agents have enhanced the "flushing" of colors before the addition of the varnish. Pigment grinding time has also been substantially reduced by the use of such agents. In the preparation of gummed paper, the addition of a wetting agent to the adhesive solution will insure a thin and uniform gum coating with a decrease in setting and drying time.

The photographic gallery is a part of the lithographic plant wherein a wetting agent will find a multitude of uses. A wetting agent added to

the developer will assist the developing chemicals to penetrate the pores of the gelatin emulsion and thus assure even development. Because the agent overcomes surface tension, it tends to eliminate the formation of air bells on the film surface. Minute dust particles adhering to the film surface will resist the action of ordinary developer and in some cases cause pin-holes, which of course will add to the opaquing operations. When the developer contains a wetting agent, the dust particles are released, thereby eliminating pin-holes from that source. A wetting agent in the hypo will expedite fixation particularly in the case of paper negatives. If, after washing, negatives are rinsed in a water-bath to which a small quantity of wetting agent has been added and then hung up to dry without further rinsing, the negatives will dry faster, smoother and without watermarks. For all retouching operations, such as opaquing, staining, etc., a few drops of a wetting agent will enable one to work smoothly on hard, repellent or greasy surfaces. When ruling lines on glass or film negatives, glossy prints, cellophane and celluloid, the hardness or greasiness of the surface often prevents an even flow of the ink from the ruling pen. The addition of only a minute quantity of a wetting agent to the opaque or India ink will overcome this difficulty. It will also be found advantageous to use such agents in conjunction with dot-etching solutions. A more uniform penetration of these solutions will result in a smoother tonal correction.

Considerable glass is used in the photographic as well as layout operations. Wet plate work, stripping, glass flats for duplicate negative or positive layouts, the blue print and glass print processes, etc., are but a few of the many uses to which glass is put in a lithographic plant. In all of these applications, it is imperative that the glass be perfectly clean. Here, too, the advantages of wetting agents manifest themselves. The following formulas are excellent cleaners for all glass and glassware:

1/4 oz. Aerosol OT Aqueous
(Turn to page 30)



Shortage of materials, particularly metals, a real problem, but Louis Traung, inventor of four-color offset press, and head of West Coast firm, believes the industry will not only meet the challenge—but profit from it.

LITHOGRAPHY

WE wanted to talk to Louis Traung, head of Stecher-Traung Lithograph Corp., and new vice-president of the Lithographers National Association, about lithography and the war when we saw him at the LNA Convention the other month. Here, we thought, is a man who will have a fresh slant on the situation—shortage of metal and other materials and what will be done about them—if anyone has. But conventions being what they are we were unable to have the talk we wanted at that time with Louis Traung.

However, as soon as the convention was over and we knew Louis was back home in San Francisco safe and sound we dispatched our San Francisco reporter to see him.

Find out, we told our reporter, what Louis Traung is thinking right now about lithography. Find out whether or not he finds any parallel between this war and the last one which might be significant. Find out what he observed on his trip east to the convention. Ask him if there are any great differences between production of lithography in the East and in the West. Sound him out on these points. Because we have an idea that if any man in this

country knows where we are heading in this industry, that man should be Louis Traung.

Accordingly, MODERN LITHOGRAPHY's reporter enjoyed the privilege of being entertained in Louis' den at the San Francisco plant and the rarer privilege of hearing him express his ideas.

"With aluminum and zinc on the priorities list, it is obvious that before long we are going to have to print from some other material, and this may present to lithography one of the most interesting challenges of its history," said Louis Traung.

Faced with a shortage of aluminum and zinc, steel not a likely substitute

and also due for restrictions, "there isn't much doubt we must come to synthetic plates—probably plastics—and I don't see why this is impossible," he said. "Nature originally made and presented us with a lithographic stone. Why cannot United States industry produce a synthetic plate that will do better than nature?"

Mr. Traung admits that experiments towards this end are now being carried on in the laboratories of the Stecher-Traung plants in San Francisco and Rochester.

"For the present we are assured of stocks of materials and accessories imported previous to the war (such

Faces Challenge

as dye stuffs, transfer paper, etc.) but when these are exhausted, we will get along, even as we did in the previous world war," he told M. L.'s reporter.

"In every big war we lose something, but gain something more. We learn how to manufacture more economically and better. We improve our methods," Mr. Traung said. He said he was amazed on recent visits abroad to observe how far behind America Europe was, generally speaking, and this included Germany.

"There is one very great difference between conditions in the industry now and during the last great war," Mr. Traung commented. "My recent trip East and our latest convention emphasized these facts in my mind. We are closer together, all of us, individuals to individuals and East to West in our industry than ever before. There is greater harmony between us and profounder interest in the technical aspects of our profession. Whereas only ten or fifteen years ago geographical distances separated us widely, now extreme East and extreme West are no more than a day apart.

"Rapid intercommunication has brought our industry," Mr. Traung continued, "into closer harmony and understanding than ever in the past. I observed this particularly at the recent convention. One of the most interesting and heartening features of that meeting, for me, was the keen interest displayed in the technical aspects of lithography. I have particularly in mind the discussions between ourselves and members of the allied industries and professions at the technical round tables. This increased preoccupation with techniques made this—my thirtieth LNA meeting—an outstanding one."

The reporter asked Mr. Traung if he noted any differences in the manufacture of lithography in the two extremes of the country. It is well known that he crosses the continent four or five times annually, and is constantly studying, observing and noting new trends.

"Many of the differences that formerly existed have disappeared," Mr. Traung replied, "but I think we

still have something of the wild Western spirit, while the East is inclined to be more conservative. I sometimes think we are somewhat more experimental than the East, somewhat more inclined to try out new ideas, but, of course, I'm prejudiced. Take it as a virtue or a fault, a difference does seem to me still to exist. I am inclined to think we are a little easier on our competitors here. Competition is keener in the East."

THE day M. L.'s reporter talked with Mr. Traung he had just completed arrangements for a gathering of friends on July 11 to celebrate his 75th birthday. He pointed out that not one birthday, but two will be celebrated in honor of his twin brother, Charles, who died last year. The arrangements for the birthday celebration caused him to reminisce and he told how he and his brother started out with Max Schmidt, founder of Schmidt Litho, also of San Francisco. He said Mr. Schmidt was forever in a dilemma while the Traung brothers worked with him because he could never tell them apart.

"We solved that problem for him," said Louis Traung, "by going into business for ourselves in a one-story building at the corner of Green and Battery Streets."

However, except for occasional references to his brother, who seems never absent from his thoughts, Mr. Traung talked mostly of the future of the lithographic industry. It is faced with a great test in the days ahead, he said, and unless technicians were on the watch for new methods and for means of improving processes and procedure, many of the competitive advances made by lithography in recent years would be nullified. He felt confident, however, that this would not happen, pointing out that the same progressive minds which had brought the industry to its present high level were still at work today.

"There has been no embargo on the ingenuity, imagination and creative thinking of lithographers," he said, "and I see no reason why even greater advances may not be made

in the technique of lithography right now. After all, we don't really know what we can do until we are called on to do it. And that moment seems to have arrived."

Wetting Agents

(from page 28)

1 gallon distilled water

or

½ oz. Aerosol OT Aqueous

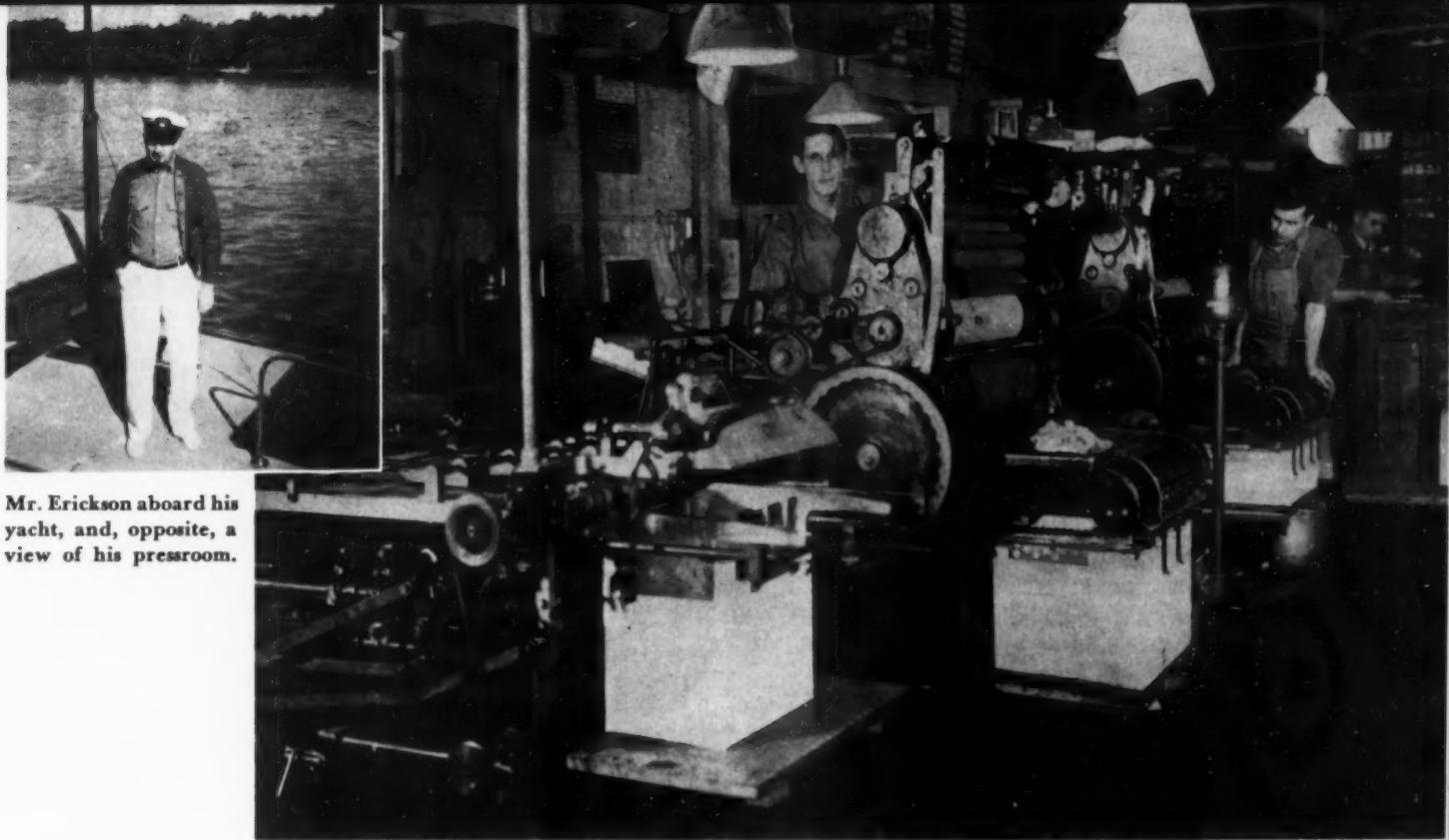
5 pints Isopropyl or Denatured Alcohol

11 pints water

Either of these two cleaners is applied by means of an atomizer or with a cloth wet with cleaning solution. The glass should then be dried with a soft clean lintless cloth. Glass so cleaned will be free of grease and dirt and will be sparklingly clear. The latter formula has the advantage in that it dries more rapidly. The use of a 3% water solution of Nacconol NRSF, to which ammonia and alcohol have been added makes an excellent preparation for spraying on windows and other glass surfaces.

Wetting agents are widely used by house painters for the removal of old wall paper. The quicker penetration possible by the use of a wetting agent permits the removal of the paper more readily. This application indicates a possible use with transfer paper. It is logical that a wetting agent will facilitate the penetration of the water through the paper base and thereby hasten the loosening of the soluble sub-stratum.

Lithographers producing labels can suggest to their customers, particularly soda bottling plants, the use of a wetting agent for the removal of old labels. The rapid penetration of the water promoted by the wetting agent will materially reduce the time necessary for liberating the old label. Aside from the technical applications of wetting agents, they will also be found useful in many everyday cleaning operations. They will be found an efficient medium for the removal of grease and grime from all sorts of machinery, woodwork and floors of wood, linoleum, rubber, cement, etc. They will also prove helpful in the cleaning of porcelain, enamelware, etc.



Mr. Erickson aboard his yacht, and, opposite, a view of his pressroom.

OFFSET SAVED HIS LIFE

GOING into the offset business from letterpress is like exploring Mammoth Cave in Kentucky without a guide," said William L. Erickson, head of William L. Erickson & Co., lithographers and printers of Chicago.

Mr. Erickson was seated in his spic and span office and talking for the benefit of MODERN LITHOGRAPHY's Chicago reporter who had bearded him in his den to find out how a former letterpress printer feels after he's been in the offset business a few years. That, and to find out what were the particular problems Mr. Erickson had to face and lick before he could call himself a full-fledged lithographer.

From time to time MODERN LITHOGRAPHY has run articles recounting the experiences of printers who have gone into offset and always these experiences have been helpful. They were similar in many instances and still they were as wide apart as letterpress printing and lithography can be. But from what we had heard about Mr. Erickson, his experiences

... that's the view William L. Erickson, old letterpress printer, holds after three years as a lithographer.

seemed to add up pretty much to a composite picture of what the average letterpress printer experiences.

We asked him. "Mr. Erickson," we said, "you've been in the lithographic business long enough now to be able to look back, so what do you think of it?"

"Well," he said, "it saved my life. That should be enough to let you know what I think."

"How was that?" we asked.

"I was a successful letterpress printer," he replied, "and had worked up from scratch. I had a lot of money tied up in equipment, \$10,000 alone in standing type

metal. Along comes offset. What happens? I'd print a job, then the customer would reorder and blamed if the lithographers wouldn't get the job, shooting from copy I had originally turned out, and printing it at a price I could *never* hope to meet. Meantime, my standing forms gathered dust. I had to do something or go out of business. I became a lithographer to save my business life."

"You mean," we asked, "that you were able just to hold all your established customers by offset, or did it help you to increase your sales?"

"That's right," he replied. "Within

three years after installing offset equipment, my business volume increased over 30%."

"As a former letterpress printer, what would be your best single piece of advice to pass along to other letterpress printers thinking of entering the lithographic industry?" we wanted to know.

"That's easy," replied Mr. Erickson. "I'd surround myself with craftsmen—cameramen, plate-makers, pressmen, artists—who had received their apprentice training in the offset field originally. I made the big mistake of thinking I could go into the offset field with a letterpress crew. That bit of foolishness cost me plenty of worry and trouble."

"Name us," we continued, "some of the technical problems that baffled you at first."

"Well, all of them did," he replied. "The biggest stumbling block was how to make plates. I thought I knew something about it, but I was wrong. The image was always walking off the plate. The coating solution was baked too long. We didn't grain the plates to the right depth. Oh, there were hundreds of things that went wrong. I never knew there were so many variables in making a simple offset plate."

He told us that at first he and his letterpress crew attempted to solve their problems alone. Then they consulted the supply people who were helpful and gave as much of their time and experience as they possibly could.

"But it wasn't until I got a competent platemaker, brought up in offset," said Mr. Erickson, "that we got on the right track."

Offset inks, Mr. Erickson told us, presented another problem and, in spite of the able assistance rendered by ink chemists and their research facilities, it wasn't until an able offset pressman was hired that difficulties with litho inks were eliminated.

"Yes, sir," he emphasized, "my advice to anyone going into the offset field is by all means to get men who were raised in the offset field."

Mr. Erickson is what might be described, for want of a better term, as a depression lithographer. This is a term which he freely applies to

himself. He told how he had gone into the printing business at the age of 14 and four years later at the age of 18 went into business for himself with \$75 capital. That was 36 years ago. He told how from this meager start he had built up his business until in the good old days just prior to 1929 he had acquired an impressive looking plant at 2628 South Wabash Avenue in an imposing-looking structure with gray stone facade and ornamental iron grills over the windows and door. In all, his plant covered 8,000 square feet of space.

"Just the same," he said, "for eight years following the crash I was able to hang on just by the skin of my teeth. Then I installed offset."

Offset, as we told you earlier, was his life saver. Today the William L. Erickson Company operates two 17 x 22 Webendorfer offset presses and one Little Giant 12 x 18 offset press. The company has a complete camera and platemaking department. And, of course, there is a large letterpress unit.

Recently Mr. Erickson found it necessary to remodel his darkroom, which had originally been laid out for a one-man shop with about all the equipment, except presses, crowded into it. As business grew, platemaking had to stop while negatives were being processed. In the large new second floor darkroom negatives are now handled where they should be handled while space for platemaking is provided in an adjacent room arranged on an efficient straightline assembly plan.

ABIG factor in his lithographic success, Mr. Erickson says, is his complete typesetting facilities. In producing a catalog or other job calling for considerable composition he can handle it all under one roof. At the same time his offset equipment enables him to provide his customers with abundant illustrations at a cost well below that for half-tones.

"No question," he said, "where lots of illustrations are involved, offset saves a considerable sum. Where the cost of cuts for a small catalog runs up to \$400 or \$500 the customer is inclined to use them

skimpily. With offset we can give him composition, which he takes anyway, plus plenty of pictures at a price within his means."

For publication printing, where the emphasis today is so strongly on pictures, offset has demonstrated its value as a business getter for the firm. Large industrial organizations are using house organs to build institutional good will, and lots and lots of photographs are what they demand nowadays to tell their stories. And offset, Mr. Erickson pointed out, keeps plate costs down to practical limits, while color can be added at modest expense. By pushing this line, he said, a considerable volume of business has been created that otherwise customers would never have ventured into. As the nearest offset printer in a busy industrial and commercial corner of town, Mr. Erickson's location aids in producing valuable business. Different advertising media were tried but his ad in the classified telephone Red Book, he says, is productive of best results.

"The letterpress printer who launches into offset without educating himself thoroughly before-hand and without investigating the field and its possibilities from every angle is looking for trouble," he remarked, in closing our interview. "Lithography is an extremely technical process, requiring an understanding of paper, ink, typography and other factors from the lithographic point of view. The man who possesses that knowledge stands a reasonable chance to make good, if early difficulties are not permitted to discourage him too soon. After he has learned offset operations he will find this process a genuine pillar of strength and an extra anchor in a storm."

Install Carrier System

R. R. Donnelley & Sons Co., Chicago, installed a Carrier air conditioning system recently to handle humidity and temperature conditions in their press rooms. The new equipment, rated at 150 tons cooling capacity, supplements other machinery previously in use and was made necessary by recent extensive additions to the company's press room facilities.

Defense and Lithography

Please bear in mind that the defense picture is a rapidly changing one and that this is a monthly report. The facts reported herein represent the latest available information at the time of going to press. They may change overnight.

Priorities Critical List

THE Priorities Critical List, compiled by the Office of Production Management, and revised monthly, lists a series of raw materials and items of finished equipment essential to the national defense. Available supplies of items on the list may at any time be requisitioned in whole or in part for such use. Firms requiring stocks of listed materials for use on government contracts must secure preference ratings from The Priorities Committee and supplies will be assigned on the basis of these ratings. Civilian requirements are also to be determined on the basis of preference ratings, after defense requirements have been met. Forms are provided for determination of preference ratings in the various classes.

Items indicated by an asterisk are those which at the time of going to press have been subjected to allocation by the Priorities Division. Italicized items are those which appear for the first time with this edition. The list as abstracted below is far from complete. Only those items have been selected from the complete list which in our opinion might be generally in demand by the lithographic industry.

Acetone
Borax
Boric Acid

Calipers, micrometer
Chromium
Cobalt
Formaldehyde
Iron and steel products
Lenses requiring grinding
Machines: addressing and duplicating all types, including type, platemaking equipment
Mercury
Monel metal
***Nickel: alloy steel**
Non-ferrous alloys, all types
Phenol
Plates, multilith, zinc or aluminum
Potassium permanganate
Rubber, synthetic
***Steel, semi-finished, finished and fabricated, including alloys**
Thermometers, industrial
Tin
*****Zinc**

General Comment

There were no startling developments in the defense picture last month so far as the lithographic industry is concerned. Although zinc was placed under full mandatory control by OPM as of July 1st, the zinc picture is not as acute as one might have been led to believe from the welter of figures and statistics which were released following the

*****Zinc is subject to a special form of priority control. Producers are required to set aside a percentage of their production each month thus creating a pool out of which the Priorities Division allocates to meet urgent needs.**

announcement by OPM. We understand that while the OPM order on zinc is in effect, it has not yet been applied in full force. Thus, it is expected that the amount of zinc available for July for civilian use will be just about the same if not a slight bit more than the amount which was available for June.

In fact, revisions in the order imposing mandatory industry-wide control on zinc were announced on June 30th by E. R. Stettinius, Jr., director of priorities of OPM. The changes provide that a producer may make full deliveries of full quantities so long as these deliveries do not interfere with defense orders, that customers for zinc must file affidavits stating that customers are not increasing inventories to unnecessary levels, and affidavits with the OPM stating their intention to report non-observance of this order. Lithographers are cautioned, however, not to be misled by this situation. The full mandatory order on zinc may be applied overnight.

Defense officials estimate that the zinc companies will have to undertake a new smelter expansion program that will add another 6 to 10 per cent to smelter capacity. This will be in addition to the 30 per cent expansion undertaken last fall and which is now being reflected in the small but steady production increases. The situation in zinc is easier than in some other defense metals, but with all the expansion under way or contemplated, the prospects are that zinc will be available for only a few most essential non-defense industries "for the duration."

A shortage of chlorine has developed and the government has announced that its requirements for defense will absorb about 30 per cent of the available production. Naturally, this will affect the production of pulp paper, though a direct effect on the lithographic industry is not probable. Of course, paper stocks will probably now become a shade or two darker.

The situation in regard to gum arabic remains about the same. We understand that there is plenty of gum arabic at the docks at this time

in Alexandria, Egypt, but that there are no ships available to bring it into the United States. In the meantime, lithographers' inventories grow lower. Harris-Seybold-Potter Company has announced a substitute for gum arabic which we understand can be manufactured for the trade if the gum arabic situation becomes acute. In that connection, a substitute for gum arabic, known as "Cellofas" WFZ, which is the sodium salt of a cellulosic acid, is described in a recent bulletin issued by the Printing and Allied Trades Research Association, London, England. "Cellofas" WFZ, according to the bulletin, can be used in exactly the same way as gum arabic for desensitizing both zinc and aluminum plates. Although the cost per pound of the substitute is higher than gum arabic, only a two per cent solution is said to be required as compared with about 25 per cent solution of gum arabic. Advantages cited for "Cellofas" WFZ are that it keeps well; it is a manufactured chemical and, therefore, less likely to vary in properties; and supplies are plentiful. Among the disadvantages are that it is more trouble to make up into solution and, unless precautions are taken, drawn plates are liable to scum and thicken.

Those interested in a somewhat more detailed picture of lithographic materials under war conditions are advised to get a copy of the May 1941 issue of *Harris Impressions*, published by Harris-Seybold-Potter Co. On page 3 of that issue William H. Wood, research director, covers the situation in some detail.

The Labor Division of OPM, having observed the growing use of pictographs in employee reports, handbooks and instruction booklets, is seeking to adapt this medium to the training of workers for defense industry.

As a first step in this direction, Rudolf Modley—President of Pictograph Corporation, New York City—has been appointed as Consultant by C. R. Dooley, head of the Training Within Industry Program. This appointment follows Pictograph Corporation's pioneering work in pictorializing problems in industry.

Offset platemaking

I. H. Sayre is instructor in platemaking and camera operation at the Chicago School of Printing and Lithography, and author of the highly successful textbook, "Photography and Plate-making for Photo-Lithography," which was published recently. Don Nicholson's series on platemaking, which has been appearing in this column for the past six months will be resumed subsequently.

BY I. H. SAYRE

LITHOGRAPHERS frequently complain of trouble when processing plates by the deep etch method. The trouble is usually caused by any one of several variables which are listed here and classified.

1. Exposure

- (a) Overexposure results in a pale looking image and a pale, faded looking print.
- (b) Under exposure results in lack of shadow detail, a heavy print and scumming in the non-printing areas.
- (c) Weak positives which allow the light to penetrate the image will result in a blind plate.
- (d) Stained positives which contain a yellow or amber tint will result in an imperfectly hardened resist coating which may be penetrated by the etch and other materials and cause scumming.

2. Faulty Coatings

- (a) Colloidal solutions improperly filtered will permit some solid matter to enter the solution

or coating and result in streaks or open areas in the coating.

- (b) Dust and specks of dirt or old dried coating material which may be blown against the wet coating solution in the whirler will cause abrasions in the coating which permits the solutions to penetrate to the metal.
- (c) Too thick a coating will make a poor protective resist as the light fails to harden it completely to the grain of the metal. The etching solution and other materials will undermine such a coating in the process of development, cause the image to spread laterally.
- (d) Damp papers and rags coming into contact with a dry coating will soften it so that ink, lacquer and other fluids will penetrate to the metal and set up scum.

3. Faulty Development

- (a) All colloidal matter leaves a thin deposit on the surface of the metal which desensitizes

MODERN LITHOGRAPHY

it to ink. Development must completely remove all coating material in the image areas or a blind plate will result.

- (b) Developing solutions must be completely removed; likewise the etching solution, as both contain substances which are resistant to ink. Failure to clean plate thoroughly before applying lacquer and ink results in a blind image.

4. Insufficient "grounding" of image

- (a) Ink must be well worked into the image and polished down smooth. The same, of course, applies to lacquer. Too much scrubbing in the removal of the resist coating, and the application of too hot water will remove much of the ink and may result in a blind plate. Touching the image with a perspiring hand before the ink is applied will also cause blind spots in the image areas.

THE following are instructions on stripping film which we use in our classes at the Chicago School of Printing and Lithography. They should prove of interest to the lithographer.

Gelatin Cement

30 oz. hot water (125° F.)
1/4 oz. Knox Gelatin
1/4 oz. Photo Glue
2 oz. 28% Acetic Acid

Half Strength Collodion

(a) Stripping Collodion 4 parts
(b) Anhydrous alcohol 2 parts
Ether 2 parts

Put B together and add A.

1. Development and exposure is the same as thin base film.
2. Stop bath—immerse for 10 seconds. (16 oz. acetic acid 1 gallon water) 28% acetic that is.
3. Fix for 2½ minutes.
4. Wash in cold running water for 15 minutes.

(Turn to page 39)

Technical news and Literature

This is a regular department conducted by Mr. Martin, of the Harold M. Pitman Company, in which technical books, articles, papers and similar literature of interest to the lithographic industry are reviewed and discussed. It is intended as a supplement to the Lithographic Abstracts prepared by the Research Department of the Lithographic Technical Foundation, Inc.

BY KENNETH W. MARTIN

Printing and Litho Inks by Herbert Jay Wolfe. Published by MacNair-Dorland Company, New York, N. Y. 411 pages. Price \$6.00.

THIS is the third edition of what is just about the only really informative book on printing inks available to the general public. It was originally published under the title "Manufacture of Printing and Lithographic Inks." The new title is more descriptive as the information given in this third edition is of a general nature and is more likely to impress the reader with the complexity of the ink maker's problems than to suggest that every man should be his own ink maker. The manufacture and use of Ink Vehicles, Solvents, Pigments, Resins, Driers, and Compounds are discussed in detail. After this, the author treats the actual compounding of Typographic, Lithographic, and Intaglio inks, giving suggested formulas for several colors under each heading. Another chapter is devoted to the manufacture of special inks such as Silk Screen Inks, Mimeograph Inks, Overprint Varnishes, etc. The book ends with a chapter on the

equipment used by the ink maker and a chapter on testing. An adequate index is included so that the book may be used easily as a reference.

The author points out that while typographic and lithographic inks are similar in most respects, the use of water in the lithographic process limits the type of pigment which can be used. Inks for offset use must be extremely concentrated and body must be obtained by pigments, rather than by the use of heavy bodied varnishes.

The last chapter of the book is devoted to the interesting subject of testing pigments, vehicles, and finished inks. The lithographer is always interested in the color strength of the inks he buys and very often their permanence is of vital concern to him. Wolfe has covered the subject of testing in a very comprehensive way.

Despite the careful explanation given by the author as to the properties of finished inks, this reviewer must comment on the methods used to evaluate them.

"The tack of two inks is best compared by taking up a little of one

ink on the index finger and a little of the other ink on the middle finger of the same hand and patting the two inks out simultaneously on a piece of bond paper. The patting out should be done slowly and with considerable pressure and the pat-outs carried down to the printing tone of the inks so that the so-called "under-tack," or printing tack, of the two may be compared."

How much better if the ink makers would standardize on a machine such as the L. T. F. Inkometer, the operation of which is explained in detail in Wolfe's book, and plainly label the conditions which the pressman might expect to find when he picks the paper from a tin of ink. Probably no ink can be made which will be correct for all press conditions, but surely a statement on the label of the conditions that exist in the ink can would provide a starting point for the pressman. Even the paper might come labelled with the suggestion that ink of a given tack would run without pulling the sheet apart.

U. S. Patent No. 2,230,981. (Offset) Printing Plate. William Craig Toland and Ellis Bassist assignors to William Craig Toland, Brookline, Mass., as trustee. 26 claims.

THE patent refers to a lithographic printing plate the printing surface of which is formed of polyvinyl alcohol. The polyvinyl alcohol film may or may not be hardened by bichromates or similar chemicals and the use of a filler such as calcium carbonate, clay, or the like, is covered. Such a coating may be placed on any suitable support such as paper or metal. Because the coating itself is hydrophilic or water sensitive, it is claimed that no graining is necessary, although if the support used has a grained or roughened surface, the hydrophilic coating will follow the contours of the base surface. It is claimed that such a plate will be less expensive and will eliminate some of the etching and gumming operations now required. The use of paper as a base material is suggested.

*Comment: Polyvinyl alcohol resins
(Turn to page 39)*

Offset paper at work

Another in the series on offset paper
by Mr. Wheelwright, editor of
"Paper & Printing Digest" and author
of "From Paper Mill to Pressroom."

BY WILLIAM BOND WHEELWRIGHT

YOU wouldn't think of printing in the dark. Of course not. But many lithographers are guilty of doing something almost equivalent to this unthinkable procedure. Unless you take the precaution to ascertain the moisture content of paper before putting it on the press, and compare it with the relative humidity in the pressroom, you are certainly "in the dark," so far as foreseeing misregister trouble is concerned. No matter whether your pressroom is air-conditioned or not, you are headed for possible trouble unless you know whether the paper moisture content is in equilibrium with the moisture content of the surrounding air.

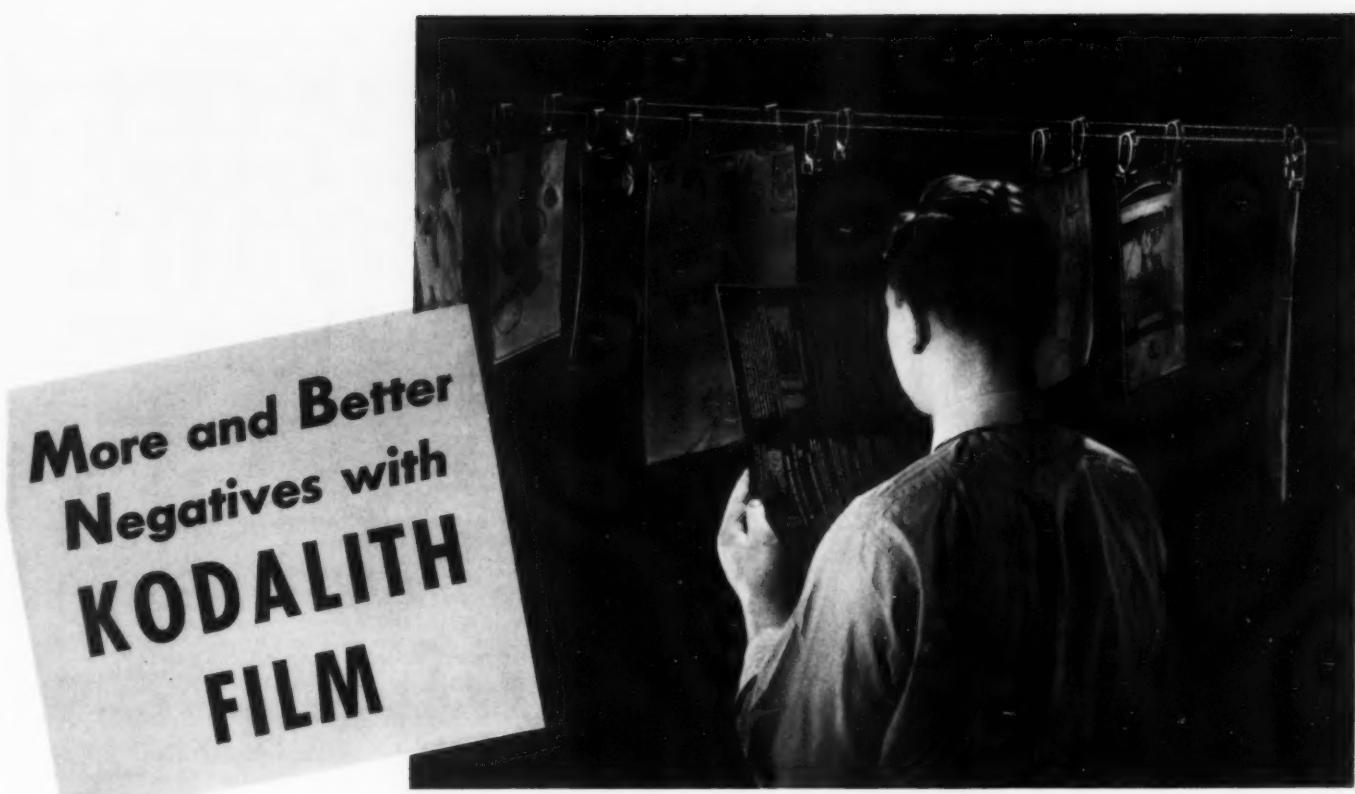
What do we mean by "equilibrium?" That can easily be explained when we understand the hygroscopic property of the cellulose fibres of which paper mainly consists, that is, their nature to absorb or give off moisture in accordance with alterations in relative humidity. To understand this we must be sure of our definition of "relative humidity." This means the relation of the amount of water vapor actually in the air compared to the quantity it could hold at the existing temperature and pressure. If with a given amount of moisture in the

air the *temperature is lowered*, the relative humidity is increased, or if the *temperature is raised*, the relative humidity is decreased.

Tests have shown that for every ten per cent alteration in relative humidity, there is a change of moisture content in paper of approximately one per cent. If the moisture in the paper increases, the fibres swell in diameter causing an elongation of the sheet dimension crosswise of the grain. If the moisture content decreases, the fibres shrink and shorten the dimension of the sheet crosswise of the grain. This action occurring between the printing of two different forms naturally results in misregister.

In the testing department of the Government Printing Office all deliveries of paper are tested under controlled temperature and relative humidity—70° F. and 50 per cent relative humidity. It is well to note that the moisture content varies somewhat according to the kind of fibre predominating in the various papers. It also is of interest to know that the papers as received at the Government Printing Office (according to test records) are not in precise equilibrium with the normal relative humidity of 50 per cent.

Assuming for example that the



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Research Bulletins for Lithographers

The following Research Bulletins and Educational Text Books are available for general use in the lithographic industry—

- Research Bulletin No. 1**
The Characteristics of Paper and Their Relation to Lithography—By Robert F. Reed.....Price \$0.75 per copy
- Research Bulletin No. 3**
The Etching Operation in Lithography—By Robert F. Reed, Paul W. Dorst and S. C. Hornung.....Price \$1.00 per copy
- Research Bulletin No. 4**
The Light-Fastness of Lithographic Ink Pigments—By Robert F. Reed and Wm. D. Appel.....Price \$0.75 per copy
- Research Bulletin No. 5**
Tackiness, Glazing, and Engraving of Offset Blankets—By Robert F. Reed.....Price \$0.75 per copy
- Research Bulletin No. 6**
The Albumin Process of Photolithography—By Robert F. Reed and Paul W. Dorst.....Price \$2.00 per copy
- Research Bulletin No. 7**
Lithotine, A New Lithographic Solvent—By Robert F. Reed and Anthony George.....Price \$1.00 per copy
- Research Bulletin No. 8**
Processes for Making Deep-Etched Zinc Lithographic Plates by Photo and Hand-Transfer Methods—By Robert F. Reed, Paul W. Dorst, and Anthony George.....Price \$2.00 per copy
- Research Bulletin No. 9**
Deep-Etched Aluminum and Zinc Lithographic Plates by the Gum Process—By Robert F. Reed and Anthony George.....Price \$2.00 per copy
- Research Bulletin No. 10**
Deep-Etched Lithographic Plates Directly from Negatives—By Robert F. Reed and Anthony George.....Price \$2.00 per copy
- Research Bulletin No. 11**
Dot-Etching on Dry Plates and Films—By Robert F. Reed and Paul W. Dorst.....Price \$3.00 per copy
- Research Bulletin No. 12**
Litho-Kleen, an Improved Cleaner and Preservative for Offset Blankets and Rollers—By Robert F. Reed and Anthony George.....Price \$1.00 per copy
- Handbook of Air Conditioning for Lithographers**
By Robert F. Reed.....Price \$1.00 per copy
- Research Paper No. 480**
Register Studies in Offset Lithography—By C. G. Weber and R. M. Cobb.....Price \$0.50 per copy
- Research Paper No. 633**
Reactions of Lithographic Papers to Variations in Humidity and Temperature—By Charles G. Weber and L. W. Snyder.....Price \$0.50 per copy
- Research Paper No. 730**
Relation of Paper Properties to Register in Offset Lithography—By Chas. G. Weber.....Price \$0.50 per copy
- Research Paper No. 859**
Treatment of Offset Paper for Optimum Register—By C. G. Weber and Martin N. V. Geib.....Price \$0.50 per copy
- Research Paper No. 1054**
New Test for Dimensional Changes in Offset Papers—By C. G. Weber and M. N. V. Geib.....Price \$0.50 per copy
- Sales Bulletin No. 1**
The Paper Hygroscope—By Robert F. Reed.....No charge
- Sales Bulletin No. 2**
The Register Rule—By Robert F. Reed.....No charge
- Technical Bulletin No. 1**
Modern Paper-Conditioning Methods and the Paper Hygrometer—By Robert F. Reed.....Price \$1.00 per copy
- Technical Bulletin No. 2**
The Inkometer, An Instrument for Measuring the Consistency of Lithographic and Printing Inks—By Robert F. Reed..No charge
- Technical Bulletin No. 3**
Method of Conditioning Paper for Multicolor Offset Printing—By C. G. Weber and M. N. V. Geib.....Price \$1.00 per copy
- Basic Tests for Apprentices**
Single Color Offset Press—By D. J. MacDonald.....Price \$6.00 per copy
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pressroom temperature was actually the same, and the relative humidity the same as the laboratory, all of the papers tested would have been *out of equilibrium* if printed in the condition that the deliveries were received. The newsprint would have contained too much moisture for these conditions. On a second impression it would have had time to shrink. All the other papers would have contained too little moisture, and before a second impression would have had time to expand. In both events misregister would have resulted.

These records are cited because they are no doubt typical of other places. They show the desirability of knowing two things before paper for close register work is put to work: (1) the moisture content of the paper; (2) the relative humidity of the pressroom. In lithographic plants allowances must also be made for the moisture transferred from the printing surfaces to the paper.

The condition of paper as received has an important bearing on successful printing operations. Whether or not your plant is equipped with air conditioning apparatus or seasoning equipment, it is a great help to know what to expect of any given lot of paper before beginning a run. For this purpose a moisture indicator is a very handy instrument. This instrument is calibrated directly in per cent relative humidity. It is a portable sword-shaped affair with a thin, hollow, perforated blade. Within the perforated section of the blade, is located a measuring element whose length varies with changes of moisture, and causes the pointer in the indicator on the handle to reflect

the conditions of the surrounding air. The blade is inserted into stacked paper after having first exposed it a while in the air. It quickly indicates the moisture content of the air between the sheets. This figure should be checked against the room air, showing whether or to what degree the moisture content both of paper and air are in equilibrium with one another.

After the sheets have been through the press a second test will determine if they have taken up enough moisture to cause poor register on the next impression. In case the pressroom lacks moisture control equipment, and the difference between moisture content of the stock and relative humidity of the air is dangerously great, subsequent impressions may be postponed until weather conditions have again become sufficiently favorable to correct the relative humidity in the pressroom.

The ideal shop is, of course, air-conditioned, which makes it possible for a paper manufacturer to deliver stock which is calculated to be approximately in moisture equilibrium with the air in that shop. Even so, nothing can safely be taken for granted. Precision control is the order of the day. Your doctor no longer prescribes merely after looking at your tongue. He takes your temperature, measures your blood pressure and even places you under scientific observation for a period of time. Similarly, the progressive lithographer specifies the moisture content in making-orders for paper, checks it after delivery for moisture content, and checks that result against the relative humidity of his

pressroom. In this day of scientific enlightenment, there is no longer any good reason for working in the dark.

Offset Platemaking

(from page 35)

5. Soak film loose from backing in luke warm water.
6. Strip off film and place on glass in same position it had on film base. Use gelatin cement on glass before putting down stripping film. Merely rub cement on with a piece of cotton. Squeegee the film gently with a clean blotter.
7. Keep film away from warm surfaces while drying. Do not place on glass table if table gets warm, as this will cause the edges of film to curl.
8. After film dries, coat with half strength stripping collodion, cut with a razor blade and re-strip. Can reverse film now if desired.

Technical News and Literature

(from page 36)

which, by the way, are entirely synthetic in the strict sense of the word, have been suggested for practically every phase of offset plate making. The present shortage of the usual lithographic metals should act as an incentive for inventors to work on the problem of adequate substitutes. Not only that, but the grain put on zinc and aluminum has at one time or another been blamed for just about every kind of trouble that offset plates are heir to.

One question naturally arises when plates such as those described in the above patent are discussed. These plates are supposed to be used in connection with the albumin process. That would mean that when the print is made, the albumin line or dot would be resting rather insecurely on a base of hard jelly. It would be expected that dampening water would work sideways and attack the albumin from below where it is unprotected by ink. Of course, what probably happens is that the sensitizer present in the albumin coating will sensitize the base as well and when the plate is exposed enough hardening action will be extended to the base to prevent such side action.

KIND OF PAPER	Moisture Content at 70° F.—50% Rel. H.	Moisture Regular Average	Content of Deliveries	
			Maximum	Minimum
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M. F. Book	6.3	4.6	5.4	3.7
S. & S. C.	5.2	4.9	5.5	4.1
Sulphite Bond	6.0	5.8	7.7	4.5
50% Rag Bond	6.0	5.1	5.6	4.5
100% Rag Parchment	5.2	4.7	5.6	3.0
Postal Card	6.0	4.8	8.7	3.0

IN AND ABOUT THE TRADE

R. A. Taylor Incorporates

R. A. Taylor & Co., offset lithographers, of 1317 Ethan Avenue, Cincinnati, formerly a partnership, incorporated last month under the name of R. A. Taylor Corp. Executives of the company are R. A. Taylor, Francis P. King and George Hieber.

Henry V. Black Dies

Henry V. Black, 84, formerly president of Snyder & Black, Inc., one of the oldest lithographing firms in New York, died last month. Mr. Black joined the company in 1879, after his graduation from college. He succeeded his father, who had founded the firm in 1844, as president, and remained as the company's head until his retirement twenty years ago.

Miami Valley Group Re-Elects

William H. Merten, Strobridge Lithographing Co., Cincinnati, was re-elected president of the Miami Valley Lithographers' Association, Cincinnati, at its annual meeting held recently. Other officers re-elected included William T. Bossard, Cincinnati Lithographing Co., vice-president and treasurer; E. P. Rockwell, Typothetae executive secretary; and the following directors: Orville H. F. Weismann, Korb Lithographing Co.; Thos. Stevenson, Jr., Stevenson Photo Color Co.; and Oliver Jenkins, Rainbow Lithographing Co. Oliver Perin, Gibson & Perin Co., and John T. Bell, Reynolds & Reynolds Co., Dayton, were named to the board of governors to replace J. R. Zimmerman, Foto-Lith, Inc., deceased, and L. H. Forster, Reynolds & Reynolds Co., who resigned.

John Hraback Dies

John Hraback, 41, of Sleight Metallic Ink Co., Chicago, died June 12 after an illness of two and a half months. Mr. Hraback had been with the company seventeen years and was a member of the Board of

Directors. He is a brother of Louis Hraback, vice-president of the concern.



GEORGE C. KINDRED

. . . new president of Point-of-Purchase Advertising Institute. Mr. Kindred's business career has always been concentrated on point-of-purchase advertising, or display merchandising. He was formerly associated with Snyder & Black as a display salesman. In 1928 Kindred, MacLean and Company was formed, with Mr. Kindred as president. Mr. Kindred is also treasurer of the Lithographers National Association and vice-president of the Eastern Lithographers Association.

P. N. A. Holds Regional Meetings

The Printers National Association held two regional meetings last month, one on June 10 in New York and the other on June 16 in Dayton, Ohio, for the purpose of discussing preliminary plans for broadening the group's activities. The proposed plan endorsed by members at the regional meetings will be presented for final discussion and adoption at the association's annual convention to be held October 3 and 4 at the Greenbrier, White Sulphur Springs, W. Va. Both meetings were presided over by the group's president, William A. Edelblut, Judd and Detweiler, Washington, D. C.

Kindred Heads P. O. P. A. I.

George C. Kindred, of Kindred, MacLean & Co., Long Island City, N. Y., was elected president of the Point-of-Purchase Advertising Institute last month, succeeding Lloyd L. Grisamore, Arvey Corp. D. C. Ozum of Chicago Cardboard Co., was elected vice-president and George L. Rose, Mounting & Finishing Co., Brooklyn, remains secretary-treasurer. Two new members were elected to the board of directors, Albert E. Haase, Vick Chemical Co., New York, and Ralph W. Thomas, Forbes Lithograph Manufacturing Co., Boston. Membership of the Institute now includes the following companies: American Colotype Co., New York; Arvey Corp., Chicago and Jersey City; Badger Carton Co., Milwaukee; Brett Lithographing Co., Long Island City; Chicago Cardboard Co., Chicago; Display Finishing Co., Long Island City; Dymont Co., Cleveland; Edwards & Deutsch Lithograph Co., Chicago; Forbes Lithograph Manufacturing Co., Boston; William Howe Co., Cleveland; Ketterlinus Lithograph Mfg. Co., Philadelphia; Kindred, MacLean & Co., Long Island City; Mandell Manufacturing Co., Chicago; Mounting and Finishing Co., Brooklyn; National Card Mounting Co., New York; National Process Co., New York; Niagara Lithograph Co., Buffalo; Schmidt Lithograph Co., San Francisco; Snyder & Black, Inc., New York; Strobridge Lithographing Co., Cincinnati; U. S. Finishing Co., Chicago; U. S. Printing & Lithograph Co., Brooklyn; Westcott Paper Products Co., Detroit; Western Lithograph Co., Los Angeles; and Wolff Printing Co., St. Louis.

Elect W. Floyd Maxwell

W. Floyd Maxwell, secretary of the Lithographers National Association, New York, has been elected the vice-president of the Trade Association Executives, an organization made up

of heads of trade groups in New York City.

Heads Compton & Sons

Bates Compton, for seventeen years an account executive with McCann-Erickson, Inc., advertising agency, resigned last month to become president of Compton and Sons Lithographing and Printing



BATES COMPTON

Co., St. Louis. He succeeds his father, George B. Compton, who has been with the company for 62 years and who will become chairman of the board. Compton and Sons was established in 1853 and is one of the oldest lithographic establishments in the United States.

New Indiana Offset Plant

Joseph Patrick, formerly a commercial artist with Cato Show Print Co., Cato, N. Y., has established a new offset printing plant at Fowler, Ind. The new firm will specialize in theatrical programs.

N.Y.E.P.A. Protests State Action

The New York Employing Printers Association has protested the inclusion of the Williams Press, Inc., on the list of firms eligible to bid on state printing contracts. At a conference with Governor Lehman and Joseph V. O'Leary, State Superintendent of Standards and Purchases, last month, the Association submitted data intended to show that the Williams Press is the same firm as the J. B. Lyon Co. which admitted collusion in bidding on State printing

contracts before the Moreland Commission a year ago. The Association charges that this is a reversal of the policy announced by Superintendent O'Leary following the Moreland Commission recommendation that "any individual, firm, or corporation that has participated in collusive bidding on public contracts" be prohibited from obtaining future State contracts. The State's position, as indicated by Governor Lehman at the conference, is that the printing firm is under new management and that the officers of the former J. B. Lyon Co. are not active in the Williams Press.

Uphold Art Reproduction

The New York Appellate Division upheld last month a decision of the Supreme Court denying to Hovsep Pushman an injunction to prevent the New York Graphic Society and the United States Printing and Lithographing Co. from reproducing for commercial purposes his painting "When Autumn Is Here." The painting was sold to the University of Illinois in 1930, and in denying the petition, Justice O'Brien held that the purchase of the painting by the university was "an absolute sale" and constituted "an abandonment of all the plaintiff's rights."

John M. Richardson Dies

John M. Richardson, chairman of the board of Gardner-Richardson Co., manufacturer of paper boards and folding paper boxes, Middletown, Ohio, died last month. Mr. Richardson was a grandson of J. C. Richardson, one of the founders of the company. His brothers, W. H. and Paul Richardson are vice-president and secretary-treasurer, respectively, of the concern, and his son, John M. Richardson, Jr., is assistant treasurer. Mr. Richardson was also a member of the board of the Central Trust Co. and Carthage Mills, Inc., Cincinnati.

Appoint Les L. Finkel

United Lithographing Corp., New York, has announced the appointment of Les L. Finkel as sales promotion director. Mr. Finkel was formerly sales promotion man-

ager in the circulation division of Macfadden Publications, New York.

Dunn Elected Vice-President

Joseph Cameron Dunn was elected vice-president of the Vulcan Proofing Co., Brooklyn, manufacturer of offset blankets and inking rollers, at a recent meeting of the board of directors. Mr. Dunn was formerly



JOSEPH C. DUNN

the company's general sales manager and will continue in direct charge of the sales department. Mr. Dunn had been connected with E. I. duPont de Nemours before joining Vulcan in 1923 in an advisory capacity in the manufacturing department. He had a large part in the development of present-day Vulcan offset blankets, inking rollers and other technical specialties.

Detroit Group Elects Wagner

Elmer F. Wagner, Federal Lithograph Co., Detroit, was elected president of the Employing Lithographers' Association of Detroit at a recent meeting. Other officers chosen were Fred Bornman, John Bornman & Son, vice-president and C. C. Means, secretary.

Name Russel F. Greiner

Russel F. Greiner, president, Greiner-Fifield Lithographic Co., Kansas City, Mo., has been appointed to the arbitration panel of the Kansas City Motion Picture Tribunal. Mr. Greiner is also a municipal councilman.

STANDARDIZED



CHEMICALS

The Coleman & Bell Company, Manufacturing Chemists, announces that it has been selected by the Lithographic Technical Foundation to manufacture and package in ready-to-use form the plate-making chemicals and other lithographic preparations developed by the Foundation's research laboratory and described in its research bulletins.

FOR DEEP-ETCH PLATE MAKING

LTF Deep-Etch Coating Solution
LTF Stopping-Out Shellac
LTF Deep-Etch Developer
LTF Deep-Etching Solution for Zinc
LTF Deep-Etching Solution for Aluminum
LTF Deep-Etch Lacquer
LTF Developing Ink

FOR ALBUMIN PLATE MAKING

LTF Stabilized Albumin Solution
LTF Developing Ink

PLATE ETCHESES

LTF Plate Etch for Zinc
LTF Plate Etch for Aluminum

FOUNTAIN ETCHESES

LTF Fountain Etch for Zinc
LTF Fountain Etch for Aluminum
Lithotine (Litho Solvent)
Lithotine Concentrate
Litho-Kleen Concentrate (for Blanket Wash)

Stocks of LTF preparations will be maintained in the principal cities of the United States and Canada, and arrangements will be made for demonstrations.

DISTRIBUTORS

THE CALIFORNIA INK COMPANY, Inc.

THE FUCHS & LANG MFG. CO.,
(Division of General Printing Ink Corp.)

INTERNATIONAL PRINTING INK CO.

SINCLAIR & VALENTINE COMPANY

**SINCLAIR & VALENTINE CO.
OF CANADA**

For Lithography's Sake

. . . and Yours

USE



The way to help lithography grow—the way to help it take its rightful place as the reproduction process of the future . . . is to use Eclipse Deep-Set Black. That way you help yourself, too. For the only limitations the lithographic process has are the ones lithographers thoughtlessly impose upon themselves. By using an inferior black for halftones, for instance, only inferior quality can result. And you know what a black eye lithography has received because of muddy halftones. Needlessly, too. For with Eclipse Deep-Set Black halftones take on a sharpness and a gradation of tone pleasing to the most discriminating buyer of printing. Use Eclipse for lithography's sake . . . and yours.

• Eclipse Black is only one of the many unusual inks made by this company for the lithographer.

Gaetjens, Berger & Wirth, Inc.

35 York St., Gair Bldg., Brooklyn, N. Y.

538 South Clark St., Chicago, Ill.



Window display prepared by Spaulding-Moss Co., Boston lithographers, in conjunction with National Convention of the Advertising Federation of America.

Craftsmen to Meet Aug. 9-14

The International Association of Printing House Craftsmen will hold its 22nd annual convention at the Lord Baltimore Hotel, Baltimore, August 9 to 14. According to the advance program, several educational clinics will be held including a session devoted to offset. Harvey Glover, president of Sweeney Lithograph Co., Belleville, N. J., will act as chairman at the offset clinic. Among the speakers scheduled are Kenneth W. Martin, Harold M. Pitman Co., Jersey City, N. J., on "Modern Methods in Offset Plate-making," and Charles F. Geese, Philadelphia, on "Modern Methods in Offset Presswork."

Rosenstadt Heads M. A. S. A.

B. S. Rosenstadt, president of Ardlee Service, New York, was elected president of the Mail Advertising Service Association of New York at the annual meeting held last month at the Advertising Club. He succeeds A. B. Schultheis of Terminal Letter Co.

ATF Elects Kauffeld

Theodore J. Kauffeld, who joined American Type Founders, Elizabeth, N. J., in March, 1940, as manager of the Product Division, was elected a vice-president of the company at the June meeting of the board of directors, according to an announcement just made by Thomas Roy Jones, president of ATF. Mr. Kauffeld is in charge of American Type

Founders Research, Engineering, Purchasing, Patent, Service and New Products Investigation Departments. He is a graduate of Stevens Institute of Technology and began his business career with Walter Kidde & Co., in 1924. Before joining ATF, Mr. Kauffeld was also associated with DeLaval Separator Co. of New York, and Alpha Laval Co., Ltd., Inter-Continental Engineering Co., Ltd., and Steelworks Design, Ltd., all of London, England.

"Design in Printing" Exhibit

Four lithographing concerns are represented in the exhibition of "Design in Printing" on display at the Newberry Library, Chicago, during June and July as a feature of the 15th annual competition conducted by the Chicago Society of Typographic Arts. Edwards & Deutsch Lithographing Co. is represented with a package design for "Old South" perfumes and a series of window cards for Hart, Schaffner & Marx. D. F. Keller & Co. entered a house organ, the "S. T. A. Bulletin." Oil Color Lithographing Co. is showing a counter display card for Lucien Le Long cosmetics, and R. R. Donnelley & Sons Co. are displaying examples of greeting cards and promotional literature produced by their "Donnelley Deep-tone" color process. The displays are among 148 selected for hanging from several hundred entries in the Society's annual contest, the basis of the selection being superior excel-

lence in design. John Dickinson Schneider, printer-lithographer, was one of the jury of three which determined the awards.

Ideal Appoints Newell

Ideal Roller & Manufacturing Co., Chicago, has announced the addition of Roy Newell to its western sales staff. Mr. Newell will specialize in the sale of molded rubber and synthetic items. Molded goods, for which a complete mechanical molding department has recently been installed at Ideal's Chicago factory, constitute the latest addition to the company's products. Mr. Newell will make his headquarters in Chicago.

Fourth L. T. F. Course Opens

The fourth Intensive Course in the Fundamentals of Lithography, sponsored by the Lithographic Technical Foundation, in cooperation with the New York Trade School, opened on June 30th. The four-weeks' course covers practical and technical features of photography as applied to lithography, color correction, plate making, stripping and offset press work. Class instruction will be supplemented by visits to lithographing, paper, ink and equipment manufacturing plants, and lectures by well-known technical men in the field.

Awarded Government Contract

I. S. Berlin Printing & Lithographing Co., Chicago, was the successful bidder on a Government Printing Office order for 20,000,000 stamp albums to be used for Defense Savings Stamps. Earlier the Berlin Company and two other Chicago lithographing houses, Newman-Rudolph Litho Co., and American Offset Corp., had each produced 5,000,000 albums on the government's first order for 30,000,000 copies. On the re-run offer, the Berlin Company was lowest bidder for the entire job.

Merchants Paper Moves

Merchants Paper, Inc., distributor of printing and lithographing papers, has acquired a five-story building at 1101-07 York Street, Cincinnati.

Automatic CONTROL OF
DEVELOPMENT TEMPERATURE
...IMPROVES QUALITY OF WORK
...SPEEDS UP DARK ROOM OUTPUT
...SAVES FILM LOSSES
...AVOIDS MAKE-OVERS



Modern strip film technique makes possible the sparkling sharp detail in reproduction that every photo-lithography customer wants. But for successful results, it demands rigid control of developing temperature. The Kellogg-American Photo Tray Cooler is engineered especially for this purpose. It turns out the kind of negatives that makes lithography the beautiful job it should be. It quickly pays for itself in savings in time, film, chemicals and make-overs. And earns a

substantial bonus in satisfied customers for your service.

One-tray and three-tray models available, with and without refrigerated cabinets for chemical storage. Write for descriptive literature.

**AMERICAN BRAKE SHOE & FOUNDRY CO.
KELLOGG DIVISION
91 HUMBOLDT ST. ROCHESTER, N. Y.**

KELLOGG-AMERICAN PHOTO TRAY COOLER

SERVICE PLUS QUALITY!

HAS MADE OUR PLANT THE WORLD'S LARGEST

**WE SPECIALIZE IN
SMALL PLATES**
ALSO REGRAINING MULTILITH

**ZINC and
ALUMINUM PLATES**
UNGRAINED—GRAINED—REGRAINED

LITHOGRAPHIC PLATE GRAINING CO.
OF AMERICA INC.

37-43 BOX STREET., BROOKLYN, N. Y. EVERGREEN 9-4260, 4261

Cuneo Awarded State Contract

Cuneo Press, Inc., Chicago, was awarded a contract by the State of Illinois to print the new 2-cent cigarette tax stamps required in that state under a law which became effective July 1. The order called for 100,000,000 stamps which were produced by offset in Cuneo's lithographing department.

Ideal Holds Sales Meeting

Western salesmen and selling agents of Ideal Roller & Manufacturing Co., Chicago, attended a sales meeting in that city last month, during which each representative outlined some innovation in the graphic arts industry and pointed out the types of rollers which could most effectively be used. The discussions covered the newer types of inks and presses, rubber and synthetic printing plates and more efficient roller equipment for standard presses. Those who attended the meeting were Sam Acker, Denver; Ken Cramer, Cincinnati; Ralph Dickson, San Francisco; A. J. Eckel, Cleveland; Herman Ewell, Milwaukee; E. G. Pope, Kansas City; S. G. Hadsell, St. Louis; Walter Robbins, Long Island City, N. Y.; and Harry Dickson, C. W. Gleason, Sid Bird and Roy Newell of Chicago. The meeting was conducted by E. Byron Davis, vice-president and sales manager of Ideal.

Offset Paper Marks 10th Year

Worthington News-Reminder, of Worthington, Minn., first of the nation's lithographed newspapers, observes its 10th anniversary this year. Produced originally as a one-page mimeographed sheet, the paper switched to offset four years ago, when the publisher, J. M. Adams, installed a Webendorfer offset press with camera and plate making equipment. The first edition of the paper with the dateline of February 18, 1937, has become a collector's item.

The circulation has climbed from 400 to 4,500 copies. Two editions are printed, one on Monday for free door-to-door delivery in town and a second on Thursday for country readers. Due to increasing business, it was necessary to add a

second Webendorfer press about a year ago. On March 6 an anniversary edition was issued which included a four-page insert on smooth paper, carrying a pictorial story of the publication. In reviewing the progress of the paper, the publisher pointed out that job work is a big factor, since the use of offset equipment enables him to handle color jobs that ordinarily would be impossible to print in a town the size of Worthington, numbering 3,878 persons.

Elect A. T. Edwards

A. T. Edwards, president of A. T. Edwards Typography, Inc., New York, was elected chairman of the New York Group of the Advertising Typographers Association of America at the annual meeting and golf outing held last month. He succeeds Chris F. Olsen of Chris F. Olsen, Inc. Others elected were John A. Robertson, Central Zone Press, vice-chairman, and Percy J. Frost, Frost Bros., treasurer. Albert Abrahams was re-elected secretary.

Hold Annual Outing

The Litho Club of Philadelphia held its fifth annual outing at Silver Lake Inn, Clementon, N. J., last month. Big events of the day were two soft ball games in which one group of lithographers faced the tin printers and another group opposed the supply men. Other features were races, quoits and card games. Dinner and refreshments were served and prizes awarded for all events.

Expand Air Conditioning

The Meyercord Co., Chicago decalcomania manufacturer, has expanded its air conditioning equipment with the installation of additional machinery rated at 70 tons cooling capacity. Some sixteen years ago the company air conditioned the first two floors of its Lake Street plant, this installation being one of the earliest on record in a Chicago printing establishment. The new equipment, according to Supt. A. J. Knopf, will provide artificial weather for the third and fourth floors and give the concern a completely air conditioned plant.

Issue Minimum Wage Order

A wage order issued by the Wage and Hour Division, U. S. Department of Labor, became effective last month establishing minimum wage scales of 40, 38 and 36 cents per hour in the converted paper products industry, according to a recent bulletin issued by the United Typothetae of America. This order affects almost 50,000 workers, the majority of those receiving wage increases being women and girls. There are 2,120 separate establishments in the industry employing about 200,000 workers.

Add Webendorfer Press

Kankakee Engraving Co., Kankakee, Ill., recently purchased a Webendorfer 17 x 22 offset press with complete plate making equipment. Wallace Christman, the proprietor, has announced that the company is now in a position to provide litho plate service for down state printers along with the engraving service it formerly offered.

John B. Webendorfer Resigns

John B. Webendorfer, son of John F. Webendorfer, president and founder of Webendorfer-Wills Co., Mt. Vernon, N. Y., now a division of American Type Founders, has resigned as vice-president of American Type Founders Corp., and will organize a new company to handle a new line of printing presses, it is announced. Henry Basset of Tuckahoe, press designer, will be associated with Mr. Webendorfer in the new enterprise. He was also connected with Webendorfer-Wills Co. until two years ago. Details of the company have not yet been worked out, but plans are being made to locate the new plant in Mt. Vernon. The firm will handle printing presses and engineering work. John F. Webendorfer remains as president of the Webendorfer division of American Type Founders.

Popp Joins Craftsmen

Ernest W. Popp, general superintendent of Buckley, Dement & Co., Chicago, was inducted as a member of the Chicago Club of Printing House Craftsmen at the June meeting.

Report on Aluminum

The Aluminum Company of America has engaged in a gigantic expansion program which approximates \$200,000,000. By the time the program is completed in midsummer 1942, the company will have more than doubled its peak peacetime production of 1939, when more than 327,000,000 pounds of aluminum were made. The following letter from Douglas B. Hobbs of the company throws light on details of the expansion program and the status of the metal so far as civilian requirements are concerned.

Sir:

You appreciate the fact that the present war is a highly mobile war in which the airplane is of vital importance. As a result, there has been an unprecedented demand for aluminum.

At present, there is no shortage of aluminum for national defense, although civilian applications have been materially curtailed. This reduction in civilian uses has affected many of your readers who have, because of the pressure of defense demands for aluminum, been forced to accept substitutes for the duration of the war. We appreciate the spirit in which they have cooperated with us.

Just how long we will be able to say "There is no shortage of aluminum for

national defense" is problematical. There may be a shortage next month, in six months, in a year. It depends largely on plane production, not only for the United States but for Britain as well. According to a recent announcement by W. S. Knudsen, the expanded plane program will require an annual production of 1,600,000,000 pounds of aluminum. The best available estimates indicate that this is more aluminum than the whole world produced last year.

Aluminum production in the United States during 1939 was 327,000,000 pounds. Domestic production at present is at the rate of nearly 600,000,000 pounds annually, and by July, 1942 will reach 825,000,000 pounds a year. Until recently, Aluminum Company of America was the sole producer of primary aluminum in this country, and by July of 1942 it will have completed a national defense expansion program which will more than double the production built up over a half century of operation. In 1942, the company's production of new metal will amount to more than 720,000,000 pounds; and to reach this production, as well as to expand fabricating facilities, the company will have expended \$200,000,000, all of which it is financing itself.

Our expansion program includes metal-producing works at Vancouver, Wash., plants in Los Angeles, Calif., and Lafayette, Ind. They are all rapidly nearing completion.

The buildings necessary to house the additional fabricating facilities in Los

Angeles have now been completed and the equipment is rapidly being installed to handle the increased production, so that very shortly all production at the works will have increased substantially. In terms of floor space, the works has been expanded in size from 100,000 sq. ft. at the start of the war to 555,000 sq. ft. (an increase of 455 per cent).

The Lafayette (Ind.) works of the company is a fairly new plant. By October of this year, the floor space in the Lafayette works will have been increased 413 per cent and all production boosted considerably.

The forging capacity in the plants of Aluminum Company of America has been increased approximately 175 per cent; extruded shapes capacity, sheet capacity, and tubing capacity have in each case been more than doubled; while wire, rod and bar capacity is up 130 per cent, and sand casting capacity is now approximately 200 per cent more than it was at the start of the war in September, 1939. From time to time I will try to keep you informed as to the aluminum situation in so far as this company is concerned.

Cordially yours,
DOUGLAS B. HOBBS,
Aluminum Company of America

Display Candy Packages

Packaging ideas for the confectioner were displayed by Milprint, Inc., of Milwaukee, Wis., at the convention and trade show of the National Confectioners Association held in Chicago last month. A staff of twenty-two salesmen, headed by sales manager G. W. Meyer, handled the presentation. Seymour Products Co., Seymour, Conn., also exhibited its line of lithographed metal candy and cookie boxes. The lithographing, according to E. M. Pletcher, sales manager, is done at the plant of Metal Litho Co., Brooklyn, N. Y.

Chicago Craftsmen Elect

Gradie Oakes, president of Process Rubber Plate Co., Chicago, was chosen president of the Chicago Club of Printing House Craftsmen, at the annual election last month. Other officers elected include the following: 1st vice-president, Arthur W. Brooks, American Colotype Co.; 2nd vice-president, Robert P. McCarthy, W. F. Hall Printing Co.; treasurer, Clifford Johnson, Harvester Press; financial secretary, James R. Anderson, 20th Century Press; recording secretary, Joseph J. Skach, Rosenow Co.



Experts to Take Part in NAPL Technical Session

IN line with its intention to make the technical session at the forthcoming ninth annual convention of the National Association of Photo-Lithographers the most informative ever held in the history of the association, Walter E. Soderstrom, executive secretary of the association, announced this month the names of the board of experts who will conduct the technical sessions and answer all questions. The panel will consist of Ted Belitz, American Colotype Corp.; Henry Bruning, Gerlack-Barklow Co.; Fred Burtanger, Reynolds & Reynolds Co.; Summerfield Eney, Champion Paper & Fibre Co.; A. J. Fay, National Process Co.; Harvey Glover, Sweeney Lithograph Co.; Joe Machell, Stecher-Traung Lithograph Co.; and Al Rossotti, Rossotti Lithograph Co.

Even now questions have begun pouring in to NAPL headquarters and judging from some of these the board of experts will be faced with questions and problems covering every phase of the lithographic process. In last month's issue of MODERN LITHOGRAPHY some of these questions were listed in the belief that perhaps they might cause readers to think of others of their own. This month the list has been increased by the following questions:

1. What is a good way to take work out of a deep-etch plate when the area is too large to polish with a stone?
2. Is there any positive way to eliminate oxidization on aluminum plates, and if so, what is it?
3. Why does a deep-etch plate at times take a long while to roll up in the press?
4. Is any work being done to develop a substitute for zinc or aluminum for plates?
5. What causes work to thicken up on the plate?
6. Please have someone discuss the photo gelatine or collotype process.
7. What is the procedure used in dropping out dots and outlining subjects by camera manipulation?

8. Can you recommend a varnish or other covering surface which will not affect the ink lithographed on a sheet?
9. What can be done to stop a plate from gumming up? Because of the scum which forms on the plate it is difficult to keep the work clean.
10. How can we stop picking?
11. At times our work becomes dim, not clear. The impressions become hazy and lack strength, in fact the fine lines fade out entirely. What can be done with the ink to correct this difficulty?
12. What causes a scum or tint to develop on a plate before coating?
13. Can too much heat in the whirler produce scum or tint?
14. Can developing the plate before the ink has dried completely cause tinting or scumming?

Lithographers are invited to send additional questions they would like to have answered at the convention to the National Association of Photo-Lithographers, 1776 Broadway, New York.

Leaders in every phase of the advertising industry have volunteered their services in the current \$10,765,000 campaign being conducted by the United Service Organizations for National Defense. The U. S. O. program calls for the maintenance of more than 360 service clubs near army camps, navy bases and defense industries where men in service may find recreation when off duty. Every type of advertising media is being used to bring the story of the U. S. O. before the public. The entire advertising program has been developed on a volunteer basis. Writers, illustrators, radio directors, production men, type-setters, engravers, etc., all have contributed their services. Among those active in the campaign are Paul Holder of McCann-Erickson, Inc., who heads the outdoor and transportation section, and Albert Abrahams, executive secretary of the Advertising Typographers Association of America, who is serv-

ing as assistant to the chairman of the production section. More than 7,000 billboards from coast to coast have been contributed to the U.S.O. drive and now bear posters quoting an appeal by President Roosevelt for support of the campaign.

Graphic Arts Association of Illinois, Inc., is the new name just adopted by the Chicago Graphic Arts Federation. Since the N. R. A. code period, the Federation has acted in the state capital and at Washington as official spokesman for the graphic arts industry throughout Illinois. The change in name, which was authorized by the Board of Directors recently, was made in order to more properly signify the territory covered by the organization. Wilbert H. Newton, who has been identified with graphic arts activities in Chicago and Philadelphia for a number of years, has been added to the Association's staff as field secretary and contact man for Illinois printers outside of Chicago.

New regulations affecting meat labels under the Federal Food, Drug and Cosmetics Act become effective October 1, 1941. The provisions of the new law call for a complete change in procedure and will require the printing of new labels for all federally inspected meat products. Certain words cannot be used as names, under these provisions, and such things as frankfurters will have to be labeled to indicate the list of ingredients. The enforcement of the new provisions is vested in the Bureau of Animal Industry, U. S. Department of Agriculture.

The School of Design in Chicago has announced courses in advertising photography and display design, as well as general art subjects, to be given in Chicago and at the School Farm in Somonauk, Ill., from June 23 to August 2.

Nackie Paper Co., distributor of offset and letterpress papers, Milwaukee, held open house for members of the printing and lithographing industry at its new plant at 405 South Sixth Street last month.

RELIABLE LITHOGRAPHIC PLATE CO., Inc.

The Pioneer Plate Grainers of America

ALL PLATES
INCLUDING THOSE
REGRAINED FOR
MULTILITH
ARE MARBLE
GRAINED

"**R**Eliable" is far more than just part of our name. It means to our customers that our plates can be depended on to give first-class results because from start to finish the graining is handled by experts of long experience. Our plates are made right to work right—they are reliable! We carry a full supply of Zinc and Aluminum Sheets for Offset, Rota-print Presses, in fact for all the lithograph trade.

MILL
SELECTED
METAL
USED
EXCLUSIVELY
(MADE IN U.S.A.)

A trial order should "sell" you our services and products.

RELIABLE LITHOGRAPHIC PLATE CO., INC.

INCORPORATED 1916

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3-4531

GOOD INKS AS YOU LIKE THEM

Color strength and brilliance plus uniformly good press working properties make Sinclair & Carroll inks the choice of leading lithographers throughout the country. In pressrooms, large and small, these inks are winning new friends and proving their all around dependability.

Sinclair & Carroll inks are carefully supervised in their manufacture by men whose lifetimes have been spent not only in supplying your standard ink requirements, but also in developing and improving your inks to their present high standard.

Try Sinclair & Carroll inks on your next job. You will like them for the work they do. We will welcome the opportunity to serve you.

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SAN FRANCISCO
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Tel. Garfield 5834

NEW ORLEANS
518 Natchez St.
Tel. Main 4421

Five Weeklies Adopt Offset

Since the first of this year five country newspapers have been added to the list of weekly publications now produced by offset lithography, according to E. G. Ryan & Co., Chicago representatives of American Type Founder's Webendorfer division. The new publications, all of which are produced on Webendorfer presses, are *The Ad-Visor*, of Alliance, Nebr., edited by Pauline Packard; *Newsfoto*, of San Angelo, Texas, edited by Robert Reed; *Washington County Photo-News*, Germantown, Wis., edited by V. Geisheker; *Snap Ads*, Rapid City, S. D., edited by Carl Holmgren; and the *Times-News*, Mt. Pulaski, Ill., edited by H. J. Wible. E. G. Ryan & Co., who installed the offset presses, say that negotiations are pending for further installations of Webendorfer presses in several other midwestern weekly newspaper offices.

Hold President's Party

The Chicago Lithographers Club held its annual "President's Fox River Roundup" at St. Charles Country Club, near St. Charles, Ill., June 28. Mr. and Mrs. August Dube and Mr. and Mrs. Walter Liggett acted as hosts and hostesses to the 75 Chicagoans who motored out to the affair. Mr. Liggett is vice-president of the Litho Club, and both he and Mr. Dube are employed at the St. Charles plant of U. S. Printing and Lithographing Co. The afternoon and evening program included cocktails and cards, dinner and dancing. Next red letter day on the Chicago Club's calendar is July 26, when the annual picnic will be held.

Dorothea Brennan Resigns

Miss Dorothea Brennan, for the past five and one-half years in charge of the Educational Department of the Lithographers National Association, New York, has resigned as of July 1. Miss Brennan—or rather Mrs. Winters which is really her name since her marriage two years ago to Mr. Lee Winters, of New York,—has purchased a resort hotel along the Ohio River in West Virginia to which she plans to devote

all of her time. Miss Brennan declares she intends to make the new hotel and surrounding terrain, which is ideally placed on one of the most beautiful stretches of the Ohio River, one of the most attractive spots in that part of the country, second only to the famous Greenbrier, at White Sulphur Springs. No one has as yet been appointed to succeed Miss Brennan, though it is understood that the activities of the Educational Department of the L. N. A. will be continued essentially as always.

G. P. O. Announces Appointments

The Government Printing Office has announced the appointment of Ray T. Bath of Des Moines, Iowa, as its principal cost accountant. Mr. Bath was formerly manager of the cost department of Meredith Publishing Co., publisher of *Better Homes and Gardens*, in Des Moines. He has also been chosen for membership on the Commission on Cost and Management Control recently set up by the United Typothetae of America. The Public Printer has also announced the appointment of S. Preston Hipsley, of Baltimore, as Director of Training for the Government Printing Office. Before coming to Washington, Mr. Hipsley supervised job-training, personnel, and educational activities for public utility concerns in Baltimore.

Patent Exports Restricted

A bulletin on legal and governmental relations just issued by the United Typothetae of America, Washington, D. C., calls attention to an order by the President of the United States prohibiting exportation of the following items except when authorized by license:

"Any model, design, photograph, photographic negative, document or other article or material, containing a plan, specification, or descriptive or technical information of any kind (other than that appearing generally in a form available to the public) which can be used or adapted for use in connection with any process, synthesis or operation in the production, manufacture or reconstruction of any of the articles or materials the exportation of which is prohibited

or curtailed in accordance with the provisions of section 6 of the act of Congress approved July 2, 1940, or of any basic or intermediary constituent of any such articles or materials."

Under the act of Congress mentioned, the President is authorized to curtail or prohibit the exportation of any military equipment or munitions, or component parts thereof, or machinery, tools, or materials, or supplies necessary for the manufacture, servicing, or operation thereof. Lithographers and printers are advised to exercise great care in exporting any foreign patent information, or any other printed material which might fall under the classifications set forth in the above Proclamation, and to place the burden of such exporting entirely on the customer.

Lithographs Outstanding Job

Outstanding halftone reproduction is the feature of a booklet entitled "Distinctive Homes," recently lithographed by Journal Printing Co., Shreveport, La. The halftones which compose the entire booklet are unusually superior, and the use of coated stock makes the job stand up beside the best letterpress printing.

Install New Spray Device

Magill-Weinsheimer Co., Chicago lithographer, last month completed installation of a new type of spray device on presses in both the letterpress and offset departments of its plant. The apparatus, developed by H. & H. Products Co., utilizes dry powder, the advantage of which is said to be that it does not "cloud up" in the press room.

Harris Movie Available

Harris-Seybold-Potter Co., Cleveland, has just announced the completion of a new Kodachrome movie showing the offset lithographic process in detail. The new movie is a 16-mm silent film consisting of about 1200 feet. Time required for showing is about 45 minutes. The film is available to graphic arts groups, advertising clubs and schools. Reservations may be made by writing any Harris office.



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COLOR AND HOW TO USE IT

by Sterling B. MacDonald

HERE is an important answer to your color problems. COLOR—HOW TO USE IT, is a 176 (11" x 14½") page book, written simply and concisely, by an internationally known color specialist. Its contents include 20 chapters with 92 colored illustrations and diagrams, and a chart of 72 graduated colors together with calipers for finding balanced, related or contrasting color schemes mechanically. This alone is well worth the price of the book. Why not order your copy today?

Please send remittance with order

PRICE \$12.50

MODERN LITHOGRAPHY

254 West 31st Street

New York City

NEW EQUIPMENT AND BULLETINS

Safety Paper for Labels

The Bacardi Corp. of America has announced that labels used on its Amber Label rum are now being lithographed on paper chemically devised for protection against counterfeiting and embodying the company's trade mark. Safety paper, which has not previously been used for this purpose, will soon be adopted for other Bacardi products.

New Color Separation Service

Richard M. Phillips, of the Phillips Color Laboratory, Peoria, Ill., has announced a new color separation service for the graphic arts. Mr. Phillips has developed a combination masking method which he claims is an improvement over the dot etching process now employed. A feature of the method is that the strong or saturated color areas do not have the artificial "laid-on" appearance which is sometimes produced by dot etching. Mr. Phillips also offers a three-color separation service for the reproduction of Kodachromes or colored copy. The Phillips Color Laboratory, which he has recently established, is equipped with air conditioning, solution temperature control, automatic voltage regulation to desired color temperature and special equipment for color projection and separation.

Describe Senefix Solution

Senefelder Co., manufacturer of lithographic inks and supplies, is distributing a folder describing its Senefix Solution which is said to remedy roller stripping. A price list on transfer papers and transfer-room materials has also been issued by the company. Copies available.

L C Smith Carbon Ribbon Machine

L C Smith & Corona Typewriters, Inc., Syracuse, N. Y., has just announced the L C Smith Super-Speed Carbon Ribbon Machine, which is suitable for the preparation of copy

for photo-lithographic and multilith work. The machine is a two-ribbon typewriter, one of which is a regular



fabric ribbon and the other a carbon paper ribbon. The two ribbons operate independently of each other, each having its own feeding mechanism. Either one can be used separately without removing the other from the machine. For lithographic work the fabric ribbon is thrown to stencil position and the operator writes directly on the carbon ribbon. Even when equipped with the carbon ribbon attachment, the machine can still be operated as an ordinary standard typewriter.

Announce New Boxboard

Gardner-Richardson Co., manufacturer of paper board and folding paper boxes, Middletown, Ohio, has just announced a new packaging material known as "Coated Lithwite." The new product is said to be the only boxboard which is manufactured and coated on the same machine. The coating is applied by a series of rolls at the end of the driers which roll the mineral coating material onto the boxboard after it has been processed to the proper thickness and weight. The coating process is similar to that used by Consolidated Water and Power Co., Wisconsin Rapids, Wis., in the production of coated papers for picture and "slick" paper magazines. "Coated Lithwite" is said to be particularly suited for carton and display work.

Ben Day Color Chart

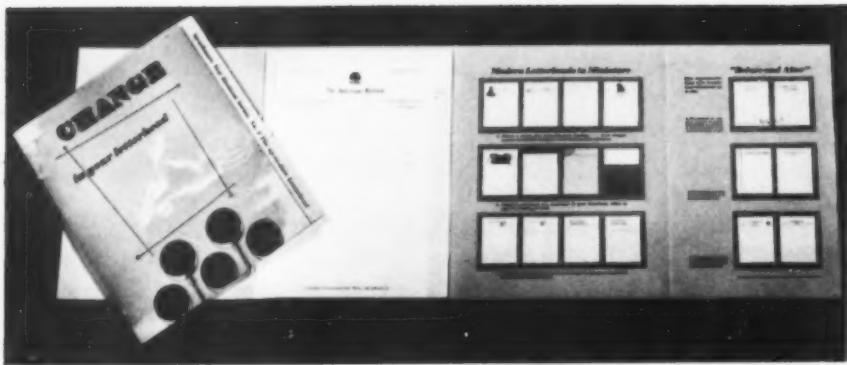
Ben Day, Inc., New York, has just issued a color chart and halftone guide showing various color combinations made with Ben Day half-tone tints. The chart consists of nine sections comprising 342 blocks of color. At each end of each block there is a Ben Day Tone of black over the color—10% black on the left and 20% black on the right. Under each block the combination color is analyzed by small sections of the individual colors in their pure tones, showing the true size of the dots. Only the primary colors—yellow, red and black—have been used in producing the chart, with the addition of two tones of black. The color guide may also be used as a reference chart for camera process color work, but allowance must be made for the fact that camera halftone dots and Ben Day halftone dots differ slightly in shape.

New Infra-Red Lamps

The Birdseye Division of Wabash Appliance Corp., Brooklyn, has just announced three new infra-red heat lamps for baking, drying and dehydrating. The infra-red lamps operate at lower temperatures than incandescent lamps and are said to develop infra-red radiant energy at wave lengths which have high penetration. In the printing and lithographing industries, according to the manufacturer, the lamps have proven effective for the quick drying of ink as the sheets come off the press. Bulletin No. 121 B giving further information is available on request.

Report on Production Clinic

General Printing Ink Corp., New York, sponsor of the Printing and Advertising Clinics, has just issued a transcript of the eighth PAC session which was devoted to "Production." Complete talks of the featured speakers are included in the booklet. Copies available.



Issues Miniature Letterheads

Strathmore Paper Co., West Springfield, Mass., has just issued a sales portfolio featuring samples of miniature stationery items to be used by lithographers and printers in creative selling. The miniature items provide suggestions for design, color combinations, layout and typography, and show matched stationery forms and envelopes. Actual commercial letterhead samples printed on various Strathmore papers are also included. The effectiveness of a modern letterhead is illustrated in a page devoted to letterheads "before and after" they were redesigned.

Announce New Binding

Tauber-Tube Binding, New York, has recently introduced a new mechanical binding known as Tauber Royal Binding Ring. The new binding consists of a coil made of plastic loops that fit into slotted holes. One end of the coil is inserted into the hole, and then with several twists, the ring spins into its proper place. The new binding is said to have the rigidity and holding power equal to that of a case bound book. The Royal Binding Ring is available in red, white and blue, and special colors which may be obtained upon order. Sizes range from $\frac{1}{4}$ " up to 1".

Explain Offset Lingo

The attractive current issue of *Linde Lines*, house organ of the J. E. Linde Paper Co., New York, features, among other things, a two-page spread on "How to Talk the Offset Man's Lingo." This is a glossary, in the form of a chart of terms associated with the lithographic process. Running from Albumen through Zinc, a different term is

given for each letter of the alphabet. Such words as deep etch, flooding, jog, kiss impression, opaquing, tusching, van dyke, etc., are defined. Under the heading, "Signs of Summer," the current *Linde Lines* also shows some unusual die-cut jobs and explains when and when not to use the die-cut. The unusual two-color lithographed cover of the publication is also a splendid example of die-cutting art.

New Warren Booklet

S. D. Warren Co., Boston, manufacturer of printing and lithographing papers, has just issued a booklet entitled "Imagination, Competence and Integrity (Or the Equivalent)" which describes the methods of various salesmen in estimating on a customer's specifications. Specimen pages printed on the company's Cumberland Gloss stock are also included. Copies available.

Describes Hi-Lite Method

Johnson Stop and Indicator Co., Eau Claire, Wis., has just issued a leaflet demonstrating the use of its Hi-Lite Stops in the reproduction of black and white halftones. Copies available.

Mitchell Stresses Cost Study

"Check costs, not profits, if competition becomes uncomfortable," is the advice of R. V. Mitchell, president, Harris-Seybold-Potter Co., Cleveland, in an article featured in a recent issue of the company's house organ, *Harris Impressions*. Mr. Mitchell stresses the futility of attempting to meet competition with run-down, out-of-date equipment and states that experience has proven profits can be considerably increased by a

close study of labor wastes, plate-making costs and analysis of equipment. W. H. Wood, the company's research director, has also contributed an informative article entitled "The Drying of Lithographic Inks," which describes research activities on driers and unsaturated oil drying. Copies available.

Issue List of Ad Books

"Books for the Advertising Man," the sixth supplement to a bibliography originally published in 1935, has just been issued by the bureau of research and education of the Advertising Federation of America, New York. The new pamphlet covers books on advertising, marketing and related subjects published during the years 1935-1940.

Use of Flag Described

The U. S. Department of Commerce has issued a new handbook entitled, "The Flag of the United States—Its Use in Commerce," which may prove helpful to the printer and lithographer when called upon to reproduce the flag for advertising material. Copies of this Trade Promotion Series booklet No. 218 may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C. The price is ten cents.

Promote Sale of Defense Bonds

The Government Printing Office is distributing one- and two-color cuts of slogans which can be used by lithographers and other members of the graphic arts on their letterheads and other types of printed matter going to correspondents and customers. The purpose of the cuts is to stimulate the sale of United States Savings Bonds and Stamps. Lithographers are also urged to obtain permission from customers to use the cuts on lithography ordered by them. The cuts are available without charge upon request.

New Index Easy to Use

The "Index to Graphic Arts Periodical Literature," published by the International Association of Printing House Craftsmen, which made its initial appearance recently, should prove valuable to printers and lith-

ographers for quick reference to articles appearing in American graphic arts periodicals. The index has been arranged so that each article or note is referred to by an abbreviated code which indicates publication, month, year and page number. A typical reference reads like this: ML-10-40-15. This is interpreted as indicating MODERN LITHOGRAPHY, October (10th month), 1940 (40), page (15). The index is being published in installments in the form of separately printed and bound supplements to the *Share Your Knowledge Review*. The parts can thus be assembled and bound up in permanent form when all installments have appeared.

Choosing Film For Your Camera.
A Guide to the Selection of Agfa Film.
Agfa Anasco, Binghamton, N. Y. 79 pages.
Price 25c.

As an aid to the intelligent selection of Agfa films in accordance with the requirements of the subject matter, this compilation has recently been published. The characteristics of each kind of film are discussed at length and sensitometric curves, time-gamma and time-temperature curves are provided. Charts for choosing the proper film according to subject matter or use are given. Exposure data, processing instructions, identification notches, filter factors, wedge spectrograms, etc., are also included. In the chapter devoted to miscellaneous information are explanations of photographic terms, safelight hints, and a table of causes and cures of typical negative defects. As a reference book, the logical and orderly compilation of facts makes the information desired quickly accessible. The worker will find this book a means of obtaining a thorough understanding of the film with which he works.

Explain Government Printing

The U. S. Government Printing Office, Washington, D. C., has just issued a booklet of questions and answers on "Contract Printing for National Defense." The questions were suggested by trade association secretaries and printers throughout the country as well as by members

of the Public Printer's staff. The information given in answer to these questions includes a description of the procedure necessary to obtain government printing jobs, the basis on which contracts are awarded, an explanation of delivery and freight charges on government jobs, views of the Printing Office on union or non-union shops and the reasons why the government supplies paper and plates on printing jobs. Copies available on request.

Announce New Service Lamp

Wabash Appliance Corp., Brooklyn, has announced a new type of electric light bulb designed particularly for use in industrial and commercial plants where high frequency vibration set up by motors and machinery tends to weaken the average bulb filament and shorten its life span. The filament of the new lamp is said to be cushioned against shock and concussion of vibration by molybdenum pigtail springs welded to flexible filament supports. An average burning life of 1,000 hours is claimed for the new lamp.

Sorg Announces Contest

Sorg Paper Co., Middletown, Ohio, is offering cash awards totaling \$200 to printing houses during the coming year, for prize-winning books, booklets, broadsides, letterheads, business forms or any other kind of material printed or lithographed on any Sorg paper. Full details of the contest available on request.

Lithograph Outstanding Booklet

"How to Step up Your Advertising Material and Save Money" is the title of a handsome promotional booklet recently issued by Stecher-Traung Lithograph Corp., Rochester, N. Y. and San Francisco. The purpose of the booklet is to demonstrate the effectiveness of color in advertising and sales material, and to explain how more color may be used economically by means of the lithographic process. Designed also to assist the buyer in the preparation of copy for reproduction by offset, the booklet describes the principles of the process, the various kinds of original copy which might be reproduced in

color, and the variety of advertising material that is particularly suited for lithographic reproduction. Also described is Stecher-Traung's "gang run" service by which smaller runs can be produced economically by lithography. This method combines or groups many lithograph jobs of the same type on a single large sheet and produces them all at once on a giant 4-color press. Full-color illustrations throughout the booklet show production scenes in the Stecher-Traung plants and a profusion of labels, cartons, box wraps, etc., which the company has produced. Captions under each photograph or drawing explain the type of original copy used. The booklet itself has been beautifully lithographed and is an outstanding example of self promotion produced by a lithographer.

Promotes Catalogs

An outstanding promotional booklet devoted entirely to catalogs has just been issued by McCormick-Armstrong Co., printing and lithographing concern of Wichita, Kan., under the title "Your Catalog." Practically an encyclopaedia on the subject, the booklet describes in detail the functions and primary objectives of a catalog, and answers with practical information almost any question that might come to the mind of a buyer in planning a catalog. To demonstrate the selling value of color in a catalog, McCormick-Armstrong has included in the booklet four pages showing full-color illustrations of outstanding catalogs which it has produced. The copy frankly points out, however, that "good catalogs cost money," but goes on to say that "after all, a good catalog is not an expense; it is a source of revenue." Also emphasized is the point "that a catalog can be so constructed that it will pay returns in which the actual outlay for its production will be absorbed time after time." The booklet in itself is a very handsome piece of work and should provide sufficient evidence that McCormick-Armstrong not only knows its catalogs when talking about them but can also do a bang-up job when it comes to producing them.

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Not quite good enough where **LITHOGRAPHIC INKS** are concerned

THE best ink is at most a small item in the cost sheet on the finished lithographed job . . . but it is a very important item so far as appearance and customer satisfaction are concerned! Minor economies in ink savings can become very expensive luxuries with but a single spoiled job. Play safe with nothing but

the best in lithographic inks. That is what our years of formulating experience here at Crescent put us in admirable position to supply.

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FOR EVERY
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SUPER CONTRAST • CRACO LITH
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CRAMER "25" • ALPHA
PANCHROME PROCESS

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**The Textbook of
PHOTOGRAPHY and
PLATEMAKING for
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The standard textbook used by the Chicago School of Printing and Lithography.

280 pages of easy to understand, step-by-step procedure for every operation from copy to the completed plate. Some of the subjects covered are . . .

PHOTOGRAPHY: The chemistry of photography and formulas; The procedure for making Wet and Dry Plate Negatives; Filtering; Halftones; Screen Separations; Drop-Outs.

PLATEMAKING: The chemistry of lithographic printing; Albumin platemaking; with formulas and procedure; Deep-etched plates by the gum or glue processes; Blue prints and other direct printing processes. Hydrometer control; pH control, etc. Price \$5 with order.

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Lithography Sells the West

(from page 19)

print is an unobtrusive description of the subject. Since it is unlikely that collectors will wish to frame all sixty views, the company has arranged to supply special albums at cost to those who wish to preserve their sets in this way. Each album holds thirty views. Collectors may also obtain from Standard Stations reinforced mailing folders to fit the prints, also at cost.

To give the prints an extra appeal, particularly to camera enthusiasts, photographic data is included with each print, details of conditions under which the photograph was taken. Every collector receives a schedule of distribution aimed at making collection easy. The schedule lists the prints, gives dates of issue at each of the ninety-one distribution zones, together with a color map of the territory on which the zone numbers are indicated.

The plan of distribution was so worked out that the motorist-collector would have to travel to collect all of the prints, but would not have to travel impossible or unlikely distances, and could gather a representative collection even if he and his family were not able to go very far afield. The West was divided into ninety distribution zones. No pictures are repeated in any zone. The same picture is never distributed in adjoining or even nearby zones. It is practically impossible for a motorist travelling main highways to pick up the same picture twice, even though he is on the road for a full month. Los Angeles, San Francisco, Seattle, Portland, Denver, and all other metropolitan centers in the area comprise distribution zones within their city limits. It is thus easy to get into other zones and pick up additional pictures. Any average tripper can pick up thirty views or more within fifty miles from home and probably the whole sixty, or close to it, within one hundred miles from home.

Response of the public to the idea has been even greater than expectations and the first issue had run out in the San Francisco Bay region as this was written.

The Standard Oil Company made a tentative try-out of the possible popularity of such a program with a test campaign last summer. A limited number of similar scenic views were given away last year, with issues at three-week intervals and release points more widely scattered. It was more difficult to collect the series and the pictures were not as tempting. Nevertheless, the response was such that it was thought safe to venture on this year's big program throughout the territories of the Standard Oil Company of California, Standard Oil Company of Texas, Standard Oil Company of British Columbia, Ltd., and The California Company, marketers of Calso gasoline (Standard Oil subsidiary) in six intermountain states.

The lithographs are getting an unusual amount of publicity, not only through Standard Stations. Department stores and other merchants, tieing in with the travel promotion idea with consequent sales of vacation merchandise, are beginning to display in their windows blow-ups of selected pictures together with lithographed display material. A number of the leading department stores of the West are using the enlargements in this way, and merchants are being encouraged by the company to give prominence to them as a means of attracting attention to their own merchandise and promoting travel among their customers.

The whole plan is one that suggests limitless possibilities to lithographers all over the United States. The Standard Oil Company is the first to use lithographs on such a gigantic scale to serve the double purpose of a free premium and advertising promotion, although Union Oil Company, a year or two ago, did something in this direction when it issued four-color postal cards with scenic views of vacation points to its Coast customers (see MODERN LITHOGRAPHY, Feb. 1941, for similar story about Shell Oil's campaign).

The Standard Oil program, so carefully worked out both from the point of view of artistic production and wide distribution, may well be studied in detail by other advertisers.

Process Lenses

(from page 23)

absorption of certain light rays by the discolored cement may seriously interfere with color separation work, particularly in regard to the blue filter. A heavy discoloration may retard the penetration of the blue rays to such a degree than an unbalanced blue record negative will result. The only practical solution for this condition is to return the lens to the manufacturer for recementing, at which time it should also be polished.

As an additional precaution the interior of the lens barrel should be carefully examined. If the internal metal work shows any spots worn bright, it may be the cause of internal reflections. Light, bouncing around within the lens, will also have a serious influence on the quality of the negatives. In most cases the application of a dull black lens paint will remedy this defect. The paint for this purpose is available in most photographic supply stores.

To measure the focal length of an unmarked lens, the lens should be securely mounted on the lens board of the camera. Then critically focus the camera to same size. Inscribe a line on the lens board base and opposite it inscribe another line on the bed of the camera. Then focus the camera accurately to twice original size (2X enlargement). Now inscribe another line on the camera bed opposite the line on the lens board base. We now have two marks on the camera bed which indicate the first and second positions of the lens. The distance between these two lines will be equal to the focal length of the lens. This test may also be conducted using $1\frac{1}{2}X$ enlargement and 50% reduction as the lens board positions.

Aids Sale of Defense Bonds

Ever Ready Label Corp., New York label manufacturer, announced last month that it would pay 20% toward the purchase of Defense Bonds by its employees and finance the balance on a 30-payment plan. Within a few days after the announcement all of the 170 employees had subscribed for bonds totaling \$6,000.

INK right!
PAPER right!
ROLLERS right!

Then the presses are ready to roll!

AND of these three parts into which all lithography is divided, to paraphrase Julius Caesar, ink is the most important. For let the ink be unfitted to the paper, unsuitable for the press, break down on contact with the fountain solution, crystallize, fail to trap, or in a thousand other ways give trouble, and the job can be ruined very readily.

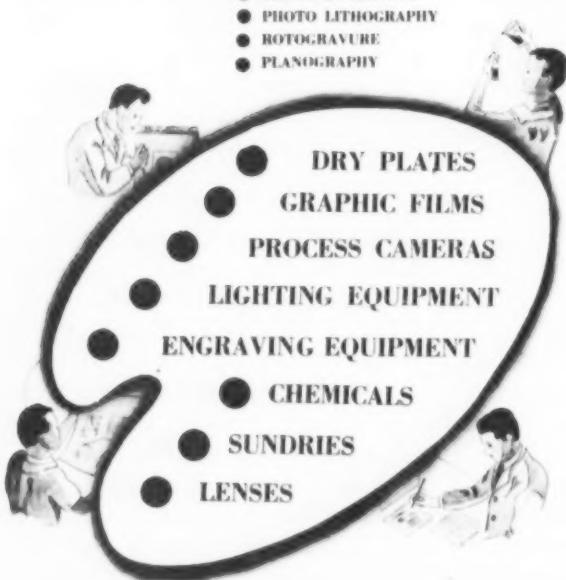
The ink must be right! And if it's ink from Bensing Bros. & Deeney it will be right. Find out how we have licked the ink problems of many another lithographer.

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LITHOGRAPHIC ABSTRACTS

Abstracts of important current articles, patents, and books, compiled by the Research Department of the Lithographic Technical Foundation, Inc. These abstracts represent statements made by the authors of articles abstracted, and do not express the opinions of the abstractors or of the Research Department. Mimeographed lists have been prepared of (1) Periodicals Abstracted by the Department of Lithographic Research, and (2) Books of Interest to Lithographers. Either list may be obtained for six cents, or both for ten cents in coin or U. S. stamps. Address the Department of Lithographic Research, University of Cincinnati, Cincinnati, Ohio. Original articles cannot be furnished except as photostatic copies at 20 cents per page.

Photography and Color Correction

Photographic Developer. William H. Wood (to Harris-Seybold-Potter Company). *U. S. Patent No. 2,238,547* (April 15, 1941). In a process of the character described, developing photographic images and hardening the gelatinous surfaces with a silver halide developer in the presence of a potassium salt embodying potassium pyrophosphate.

Photomechanical Color Reproduction. John A. C. Yule (to Eastman Kodak Company). *U. S. Patent No. 2,238,483* (April 15, 1941). A palette for preparing camera copy in a photo-mechanical process comprising a series of coloring materials in which certain of the materials have incorporated in them predetermined amounts of a material having known ultraviolet reflectivity to give them equal ultraviolet reflectivity.

The Amateur Photographer Answers Some Kodachrome Questions. Philip C. Shakespeare, Jr. *Lithographers' Journal*, 26, No. 2, May, 1941, p. 61. A description is given of the method of making reverse albumen or deep-etch plates for reproduction from Kodachrome. Separation negatives are made with a modern enlarger using Wratten Sharp Cutting filters for the yellow, red, and blue and a K3 filter for

the black. A formula is given for the developer to use if the Kodachrome is one of high contrast. After the separation negatives are brought to the right size, the halftone positives are made through a screen. If three colors are used, they should be 30° apart on the screen; if four are used, the blue, black, and red should be 30° apart and the yellow 15° between the red and the black.

Process Lenses and How To Use Them.

Fred Schmid. *National Lithographer*, 48, No. 5, May, 1941, pp. 50, 91, 93. The formulas which are used to compute the distances between lens and negative, and lens and copy board, in a process camera are explained and discussed. The method of computing the angular field with or without a reversal prism is described. The angle should not exceed 50° without a prism or 42° with one. A way of determining how large a piece of copy can be used with a given lens is explained. The copy board and negative plane must be absolutely parallel and the optical axis of the camera must be perpendicular to the two. Extreme care must be used to see that the lens is kept scrupulously clean and unscratched. It should be overhauled from time to time by the maker.

Contrast With Graded Screens.

Elbert M. Ludlam. *MODERN LITHOGRAPHY*, 9, No. 5, May, 1941, pp. 34-5, 61. There are two types of screens which may be used to produce halftone dots, that is, ruled screens and graded screens. Ruled screens consist of two series of parallel lines arranged perpendicularly to each other, whereas graded screens consist of a continually varying depth of tone. Several methods by which the latter have been made are briefly described. Ruled screens have greater flexibility than graded ones, but

because of this they do not produce standard results except in the hands of very experienced men. The characteristic response of the graded screen, however, is entirely at the control of the designer and maker.

Planographic Printing Surfaces and Plate Preparation

Printing Surfaces. Adam Henri Reiser. *Printing Equipment Engineer*, 62, No. 1, March, 1941, p. 32. Substitutes may have to be found for zinc and aluminum plates if they are reserved for defense needs. To be used for press plates a substance must possess elasticity, must accept without too much trouble or cost a firm grain that will stand the wear of an average run, and must be hard enough to grain about a dozen times. It must react economically with chemicals, be reasonably priced, and obtainable in sufficient quantities. The advantages of and reasons why zinc and aluminum have been so exclusively used up to now are discussed.

Solution for Desensitizing Metal Plates Used in the Lithographic Art.

William N. Misuraca. *U. S. Patent No. 2,242,754* (May 20, 1941). A process of desensitizing the non-printing portions of the surface of a metal lithographic plate, which consists of treating the image bearing surface of the plate with an aqueous solution of gum arabic and chrome alum.

Desensitizing Litho Plates With Chromium Sulphate Solution and Gum Arabic.

Frank Wood. *MODERN LITHOGRAPHY*, 9, No. 5, May, 1941, p. 43. A method is given for desensitizing litho plates which does not involve exposing the plate to the action of light a second time and thus saves time. The method consists of applying to the plate, after develop-

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ment and etching with dichromated phosphoric acid etch, a solution which is prepared by mixing 50 cc. of gum and 10 cc. of chromium sulphate stock solution (1 part chromium sulphate in 5 parts water) and then diluting with from 10 to 15 cc. of water. When this solution is applied to a lithographic plate and allowed to dry, a tanning action takes place and the gum will not lift from the grain of the plate, and will stand the action of alkalies and acids. A diagram is given of a good method of straining or filtering the gum to free it from sand, dirt, and bark.

Composition for Use in Printing.

Charles O. Beckley (to Western Electric Co.). *U. S. Patent* No. 2,240,487 (May 6, 1941). An ink-repellent composition for application on printing plates in an offset printing process comprising an ester of a sulphodicarboxylic acid, and water.

Method of Lithography. Byron W. Hannon. *U. S. Patent* No. 2,240,773 (May 6, 1941). A method of preparing lithographic plates comprising applying an adhesive coating including chalk to a flat substantially inexpansive rigid base, drying the coating, polishing it to a smooth hard matte ink-receiving surface, inking a drawing upon said ink-receiving matte coating surface, and transferring the inked drawing to a lithographic printing plate.

Technical News and Literature.

Kenneth W. Martin. *MODERN LITHOGRAPHY*, 9, No. 5, May, 1941, pp. 45, 47. Focussing may be done by scale by calculating correct negative and copy board distances. A description and illustration is given of a chart from which the corresponding image and object distances can be determined with a minimum of figuring. The way such a chart can be constructed is explained in detail.

Equipment and Materials

Photo-Typesetting. MacD. Sinclair. *Printing Equipment Engineer*, 62, No. 3, May, 1941, pp. 15-6, 44, 46. A number of patents have been

issued on photo-typesetting machines. All so far are still in a preliminary stage and no machines have been seen or offered for sale. The character in most of the machines proposed is set in the broadside of the slug and is either a negative letter character on a piece of film for projection by transmitted light to a sensitized film, or is a letter character formed on a contrasting opaque background for projection by reflected light. One of the first kind, in which the type is composed letter-by-letter, is described in detail with illustrations.

Paper and Ink

Printing and Litho Inks (Book).

Herbert Jay Wolfe. *MacNair-Dorland Co.*, New York, 3rd ed., 424 pages, \$6.00. The third edition of Wolfe's well-known book on inks is undoubtedly the most complete and up-to-date volume on the manufacture of printing, lithographic, and intaglio inks that has been published. Containing well over 100 pages more than the second edition of the work, five more pages have been added covering such subjects as thermosetting inks, cold-set inks, synthetic litho inks, hot wax inks, high gloss inks, aniline inks, non-scratch and rub-proof inks, rubber plate inks, silk screen inks, metallic inks, water color inks, mimeograph inks, typewriter ribbon inks, overprint varnishes, and other new and special types of inks, synthetic resins, flushed colors, addition agents, and ink solvents. The book has been almost completely rewritten to keep up with new developments in the industry during the past eight years. Exceptionally well illustrated, the volume has the added feature of a much improved index, making it even more useful to the ink maker as a reference book. (*American Ink Maker*, 19, No. 5, May, 1941, p. 41.)

Factors Affecting Ink Flow. Volney Tullsen. *American Ink Maker*, 19, No. 5, May, 1941, pp. 29-30. The pigment used in an ink affects the "flow" of the ink in several ways. Einstein found that the viscosity of a liquid increased in direct proportion

to the volume of colloidal solid dispersed in it. Pigments, however, absorb a certain amount of the vehicle, forming a hull around the pigment particle and thus increasing stiffness and decreasing flow by immobilizing a part of the vehicle. The smaller the pigment particle the more surface is presented to absorb the vehicle and, therefore, the less the flow. The shape of the particle is also important since a needle shaped or flat particle will present more surface for absorption than a spherical one.

Some Observations on the Evaluation of Inks.

R. F. Bowles. *Paper and Print*, 14, No. 1, Spring, 1941, pp. 26-31. Ink must satisfy two main requirements. First it must print and second the result must satisfy the print user. The evaluation of inks as discussed under the following headings: (1) a comprehensive ink specification, (2) determination of color strength, (3) printability of inks, (4) ink estimation, (5) operative factors in printability, (6) consistency of ink, and (7) printing technique.

The Warping of Show-Cards.

Anonymous. *Paper and Print*, 14, No. 1, April, 1941 (*Paper and Board Converter*, 2, No. 1, pp. 5-6). The warping of show-cards can be reduced to a minimum by fulfilling the following requirements: (1) board cut with machine direction (grain) running parallel to the longer side of the show-card, (2) print and lining paper cut with their machine direction (grain) running parallel to the longer side of show-card, and (3) printing paper and lining paper to have approximately the same expansions when wetted by water.

Printing Gummed Paper on Offset Presses.

Burton Lee Trodson. *National Lithographer*, 48, No. 5, May, 1941, p. 47. Gummed paper orders can be run on offset with little more than ordinary care. The gummed stock should be piled in stacks not more than 30 inches high and allowed to stand for 72 hours. The smallest possible amount of water must be used; a more acidic fountain solution

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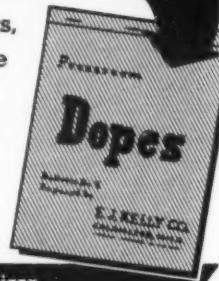
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Ink Drying. A. C. Healey. *Paint, Color, Oil, Varnish, Ink, Lacquer Manufacture*, Jan., Feb., and April, 1941. The drying of a printing ink film involves four distinct processes—oxidation, evaporation, penetration, and gelation. The driers used to accelerate drying time may act to catalyze one or more of these processes. Each process is discussed in relation to its importance in the drying of the different types of ink used for the various printing processes. The effect of the surface being printed and of the atmospheric conditions is also discussed. (*American Ink Maker*, 19, No. 5, May, 1941, pp. 25-7.)

Miscellaneous

Method of Color Printing. John J. Ormond (assignor of two-thirds to Joseph D. Ramsey). *U. S. Patent No. 2,243,486* (May 27, 1941). That improvement in methods of printing which consists in applying on an offset printing member a dense absorbent printing ink, selectively applying over the first ink while wet a second differently colored printing ink of a relatively thinner consistency adapted to penetrate into the first ink and form blended color parts throughout the thickness of the layer of the said first ink, then again selectively applying over the first and second inks while wet a third differently colored printing ink of a consistency different than that of either of the said first and second inks and adapted to be absorbed by each of the said first and second inks, thereby to effect further blending throughout the thickness of the layers of each of the said first and second inks, and then offsetting the blended inks in a wet state upon a surface to be printed, to provide a substantially dry printed, blended color image.

The Story of the Collapsible Tube. Eric Gurd. *Paper and Print*, 14, No. 1, Spring, 1941, pp. 10, 12-14, 16. A description is given of the history, development, method of manufacture, and method of printing of collapsible tubes. They are printed by letter-press or offset after the tube has been made. Each plate, if several colors are to be run, is printed on the blanket and then the complete image is transferred to the tube in one operation. The tubes are covered before printing with either a tacky enamel base or a cellulose coating.

Printing on Aluminum Foil. Ernest L. Kallander and Joseph F. Thompson (assigned to Dennison Mfg. Co.). *U. S. Patent No. 2,227,720*. As is well known, the technique of printing on aluminum foil presents serious difficulties in respect to obtaining proper adhesion between the foil and ink. This patent describes a method of overcoming such difficulties successfully. They apply to the foil, before printing, a coating consisting of an etching agent such as phosphoric acid and a resinous material such as shellac, dissolved in a rapid drying solvent such as alcohol. The coating, when dry, accepts printing inks properly and forms a bond between the foil and ink. (*American Ink Maker*, 19, No. 5, May, 1941, p. 43.)

General

Photo-Litho Review. J. S. Mertle. *MODERN LITHOGRAPHY*, 9, No. 5, May, 1941, pp. 27-30, 63. The highlights of the progress being made in photo-lithography are touched upon and discussed in relation to their possible effect in the future. There have been several improvements in the method of producing line copy lately. One kind of typewriter for producing copy on photographic paper is described. In the photographic section there has been progress in lenses, emulsion materials, and compensating devices for the refraction of light by the half-tone screen. A combined diaphragm timer and arc lamp control is mentioned. Stripfilm seems to be dis-

placing the wet collodion process. Developers, color prints, color corrections, plate material and substitutes for zinc and aluminum, preservatives for albumen, and substitutes for albumen and gum arabic are also discussed.

Full Speed Operation at Lower Cost With Scientific Control. Karl F. Weikel. *Inland Printer*, 107, No. 2, May, 1941, pp. 33-6. Scientific control by technical experts pays for itself by enabling full speed production and thus lowering costs. Causes of breakdowns can be eliminated or remedied before they cause delay. Electrical and power plant costs may be cut down. Paper spoilage due to curl, poor register, and picking may be reduced. Press performance tests and various ink tests such as color strength, running characteristics, and sun tests will help in the selection of the correct ink for a given job.

Roller Adjustment Important on Offset Press. John Stark. *Lithographers' Journal*, 26, No. 1, April, 1941, p. 16; No. 2, May, 1941, p. 60. From plate rollers all the way up to the ink fountain, the rollers should be set lightly so that there is contact and nothing more. You should be able to pull out strips of paper .003 inch thick fairly easily. Crowning form rollers only emphasizes the one place they are apt to sag—in the middle. The following are discussed in reference to their effect on roller adjustment and condition: reconditioning of rollers, fountain adjustment, ink agitators, relative humidity and temperature, ink solvent for cleaning rollers, stripping and pH control, and keeping rollers free from dried ink.

Routine of Pressroom Procedure. Theodore Makarius. *Lithographers' Journal*, 26, No. 2, May, 1941, pp. 58-9. Good pressroom procedure is discussed under the following headings: (A) inks and their mixing, (B) driers, (C) papers, (D) inking rollers, (E) dampening rollers, (F) the brass roller, (G) fountain blades, (H) rubber blankets, (I) plate grains, and (J) equipment.

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NOTE: This is a classified list of the companies which advertise regularly in MODERN LITHOGRAPHY. It will aid you in locating advertisements of equipment, materials or services in which you are particularly interested. Refer to the Advertiser's Index on page 65 for page numbers. *Say you saw it in Modern Lithography.*

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John Stark Laboratories

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Dixie Plate Graining Co.
Fuchs & Lang Mfg. Co., Div. General Printing Corp.
International Printing Ink, Div. of Interchemical Corp.
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Litho Plate Graining Co. of America, Inc.
Photo Litho Plate Graining Co.
Reliable Litho Plate Graining Co.
The Senefelder Co., Inc.
Texas Offset Supply Co.
Western Litho Plate & Supply Co.

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International Printing Ink, Div. of Interchemical Corp.
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California Ink Co., Inc.
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California Ink Co., Inc. (Zinc and Aluminum Plates)
Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp.
(Zinc and Aluminum Plates)
C. P. Goerz American Optical Co. (Lenses)
Craftint Mfg. Co., The (Opaques and Masking Ink)
Illinois Zinc Co. (Zinc Plates)
International Printing Ink, Div. of Interchemical Corp.
(Aluminum and Zinc Plates)
Kellogg Division, American Brake Shoe & Foundry Co.
(Tray Coolers)
Lanston Monotype Machine Co. (Cameras, Photo-Composing
Machines, etc.)
LaMotte Chemical Products Co. (pH Control Apparatus)
Modern Litho Print Co. (Plate Making Services)
National Carbon Co., Inc. (Carbons)
Norman-Willets Co. (Cameras, Lenses, etc.)
Harold M. Pitman Co. (Cameras, Vacuum Frames,
Whirlers, etc.)
Rutherford Machinery Co., Div. General Printing Ink Corp.
(Cameras, Photo-Composing Machines)
The Senefelder Co., Inc. (Aluminum Plates, Litho Stones, etc.)

Pressroom Equipment & Supplies

American Type Founders Sales Corp. (Presses—Offset Spray
Gun, etc.)
Sam'l Bingham's Son Mfg. Co. (Rollers)
Cambridge Instrument Co., Inc. (Moisture Indicator)
The Christensen Machine Co. (Bronzers)
Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp.
(Flannel)
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Harris-Seybold-Potter Co. (Presses)
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30" x 40" all metal Vacuum Printing Frame—\$125.00; 25 amp., 110 volt Printing Lamp—\$25.00; 18 amp., 110 volt Printing Lamp—\$25.00; other lamps. Singer Engineering Co., Complete Platemaking Equipment, 242 Mott St., New York City.

Offset Press Wanted:

17 x 22 or 21 x 28 offset press. Give details of condition, price, terms, etc. R. B. Mahaffey, Pascagoula, Miss.

New Transportation Posters

Wm. Wrigley, Jr. Co., Chicago, introduced a new type of transportation poster last month. Since it is

easier for the public passing by a board to read a flat poster than an upright, the company is using three one-sheet posters printed on one continuous sheet. The new posters are somewhat like miniature twenty-four sheets since they have the same proportions as the big outdoor boards.

Ad Group Hears Speckman

H. A. Speckman, McCandlish Lithograph Corp., Philadelphia, addressed the Hartford Advertising Club, Hartford, Conn., last month on the subject, "Getting the Dealer to Use Point-of-Sale Displays." Mr. Speckman cited many specific instances of methods used by manufacturers in various lines to gain acceptance of their point-of-purchase material.

Sorg Leases Building to Govt.

Sorg Paper Co., Middletown, Ohio, has leased the building on Broad Street, formerly occupied by its Superior-Lawrence Bag Division, to the United States Government for use as a supply depot for CCC camps. The company has also announced the sale of a building on Grand Avenue to the Interstate Folding Box Co., of Middletown. Before the transaction, both buildings were used as warehouses for storing pulp and finished paper.

To Join Chicago Craftsmen

Frank J. Benda, Jr., foreman of the offset department of Uniform Printing & Supply Co., Chicago, and Walter J. Schlican, assistant foreman, have been nominated for membership in the Chicago Club of Printing House Craftsmen.

Propaganda Printing Show

An exhibit of "Printing in a National Emergency," prepared by the American Institute of Graphic Arts, was on display at the New York Public Library last month. The purpose of the exhibit was to illustrate propaganda techniques in the graphic arts in America from pre-revolutionary times to the present. Also displayed were posters exhibited in the Nazi-conquered countries of Europe before the entrance of the German troops.

New 4-COLOR SEPARATION SERVICE

Send us your KODACHROME or colored copy and we will furnish you with continuous tone separation prints on shrink-proof paper ready for screening in your own camera . . . You'll save time, money and improve the quality of your color work with our color corrected and perfectly balanced separation prints. Average cost for 4-color separation prints, size 11x14, from your original KODACHROME \$45.00. Write us for additional information and prices — PROMPT SERVICE.

PHILLIPS
COLOR LABORATORY . . Peoria, Ill.

It's Easy To Make Money With Vari-Typer

Compose copy for bulletins, sales manuals, booklets, catalogs, folders, etc., on the composing Type Writer with changeable faces and spaces. Any competent typist after proper instruction can Vari-Type your work to photo offset copy with large savings and improved appearance.



Write Today for new specimen portfolio "How to Make Money with Vari-Typer" . . . with actual samples issued by organizations in the lithographic field.

RALPH C. COXHEAD CORPORATION
Manufacturers of Vari-Typer
333 Sixth Avenue

New York, N. Y.

EQUATOR OFFSET

A pure white, fuzz-free paper that gives exceptionally fine printing results and satisfies every demand of the critical user in respect to color, finish, opacity, bulk, strength, cost.

A product of
THE SORG PAPER COMPANY
Middletown, Ohio
America's pioneer manufacturer of offset papers.

THE RATHBUN & BIRD CO., Inc.

IN BUSINESS SINCE 1896

MACHINISTS

For LITHOGRAPHERS — PRINTERS

PLANTS MOVED

REPAIR SERVICE

MACHINES RE-CONDITIONED

85 GRAND STREET

NEW YORK, N. Y.

Telephone: CANal 6-4145-4146

LITHO PLATES

ZINC and ALUMINUM PLATES
UNGRAINED — GRAINED — REGRAINED

grained correctly to your specifications . . . for your special requirements.
We are manufacturers of METAL-SHEETS for ROTAPRINT Machines, also square edge plates for Multilith Presses.

THE PHOTO LITHO PLATE GRAINING COMPANY
1207-15 S. Highland Ave. BALTIMORE, MD.

RUSSELL THE FASTEST SELLING FOLDERS IN AMERICA

ERNEST

THE WORLD'S GREATEST FOLDING MACHINE VALUES BAUM

615 Chestnut St.

Philadelphia, Pa.

MULTILITH OPERATORS

Your Multilith is a lithographic machine. Save money by getting our complete list of litho suppliers—grainers, chemicals, ink, dryers, molleton, misc. equipment.

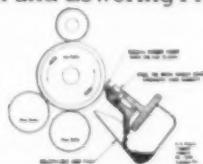
Enclose 3c stamp

MODERN LITHO PRINT CO.

211 E. Capitol

Jefferson City, Mo.

INTERNATIONAL PRESS CLEANERS
are daily demonstrating their efficiency in increasing Output and Lowering Production Costs



This Is Our Method of Removing Ink From Press
We invite you to take advantage of our thirty day trial offer. If interested write and let us know the size and make of your press.

INTERNATIONAL PRESS CLEANER & MFG. CO.
112 Hamilton Ave. Cleveland, O.

Join New York Litho Group

The New York Photo-Lithographers Association announces the following new members: Terminal Letter Co., Electro Sun Co., and J. A. Want Organization, all of New York.

Announce Contest Winners

The current issue of *Permanized Selling*, house organ of Whiting-Plover Paper Co., manufacturer of printing and lithographing papers, Stevens Point, Wis., features an announcement of winners in the company's recent "Bonus to Bloodhounds" contest. Prizes totaling more than \$100 were awarded to those submitting the most unusual uses for Whiting-Plover's Permanized papers.

Byrnes Litho Moves

Byrnes Lithographing Co., formerly located at 69 West Washington Street, Chicago, moved its plant to 608 South Dearborn Street last month.

Empire Litho Adds Press

Empire Lithographing Co., New York, now completing its 44th year in business, recently added a two-color 42" x 59" Harris offset press to its plant.

Kornman Joins Allied Printing

Joseph Kornman, formerly with Berlin Lithographing Co., Chicago, has joined Allied Printing Service Co., Indianapolis.

Issue Poster Plant Index

Traffic Audit Bureau, New York, has just issued "An Index of Audited Poster Advertising Plants in the United States and Canada." Copies available at 50c each.

Copifyer Issues Calendar

In tune with the news of the day is the very handsome painting of bombing planes diving at their objective which illustrates the 1941-42 calendar just issued by Copifyer Lithograph Corp., Cleveland. The oil painting, which is the work of Charles H. Hubbell, has been reproduced in four colors by offset lithography.

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Tale Ends



"Stand your ground, Cuthbert,—he can't bluff us!"

In time of war . . .

AN OLD saying goes: "In time of peace, prepare for war." The reverse is also good advice,—"In time of war, prepare for peace." In short, in bending every effort to supply your goods for defense needs, remember that "there will come a day" when business will return to normal. In short, advertising in representative trade papers published now is pretty good insurance for the future when orders will not be so plentiful or easy to get.

And if you want the best kind of insurance for the future in the lithographic field we suggest regular advertising NOW in

MODERN LITHOGRAPHY
254 WEST 31st STREET
NEW YORK

PLASTIC offset plates to replace zinc and aluminum? That's a question that we have heard tossed back and forth ever since aluminum and zinc supplies became a matter of concern at Washington. One point those who think plastics may be the hope of the future seem to forget is that there is a shortage of formaldehyde—as a result of the defense program—which is essential for certain types of plastics, and that there is also a shortage of phthalic anhydride—for the same reason—which is essential for other types of plastics. Therefore, the possibility of plastic offset plates seems rather remote. Professor Reed, of the LTF, pointed this out at the LNA Convention in May.

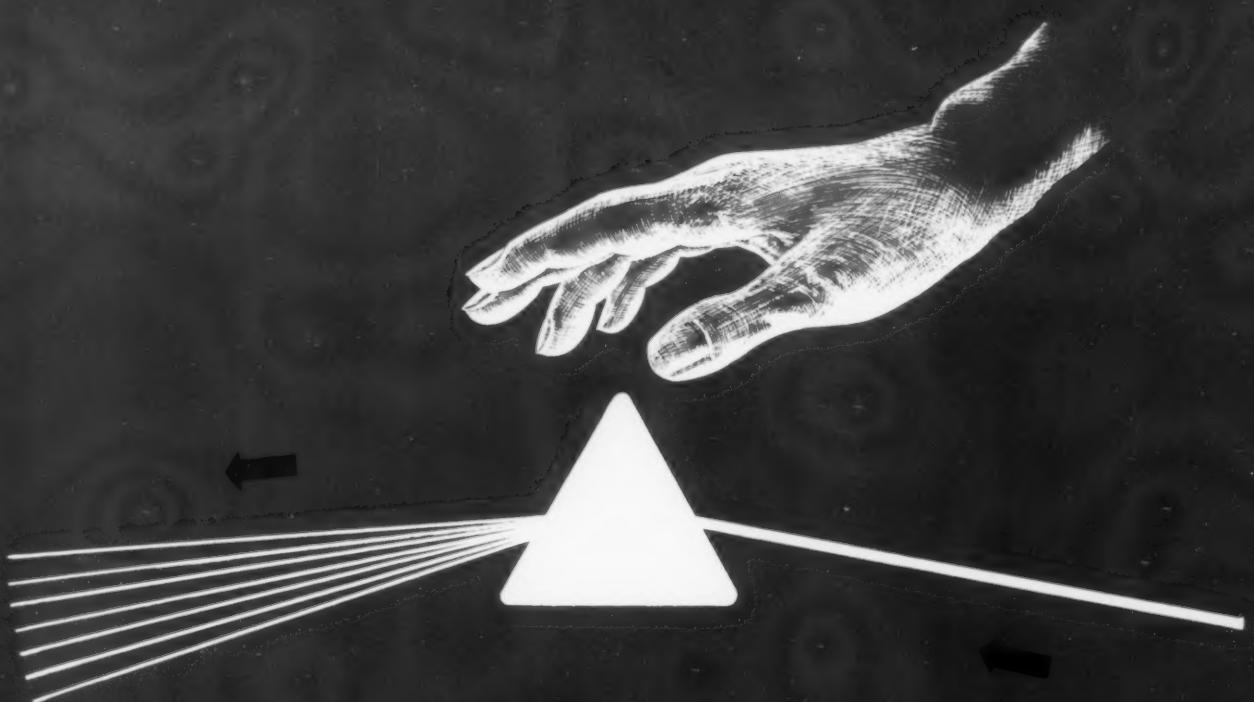
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However, there have been numerous rumors of synthetic plates which, informants have told us, were meeting with success in experimental work. So far we have seen nothing tangible. The nearest thing was a synthetic product news of which came to us through a responsible party just as we went to press and which, according to his report, really had something. We hope to have more on this subject as soon as possible—maybe next month. There's an air of secrecy about all such developments that makes facts hard to obtain.

* * *

In fact, when you come right down to it, there's an air of secrecy and confusion and rumor and gossip arising out of the scarcity of materials and alleged goings-on at Washington which is distinctly unhealthy these days. Luncheon and bar room talk abounds with "I hear this," and "I hear that," and "Did you hear," etc., etc. American businessmen acting like old ladies at a tea party looks a little silly.

MODERN LITHOGRAPHY



For Control of Color

IN MODERN color lithography close control of color is a vitally important factor. No doubt you yourself have experienced the critical nature of most multi-color copy, the need for achieving good tone separation between important colors when the separation negatives are prepared.

You'll find Agfa Reprolith Panchromatic an ideal solution to prob-

lems encountered in making color separation negatives. Endowed with balanced sensitivity to all colors, this panchromatic film also provides high contrast, great resolving power, wide developing latitude and effective anti-halation protection.

Ask for Agfa Reprolith and experience for yourself the excellence in results that comes from using finest materials. Reprolith is also supplied in Regular and Ortho types. **Graphic Film Department, Agfa Anseco, Binghamton, New York.**

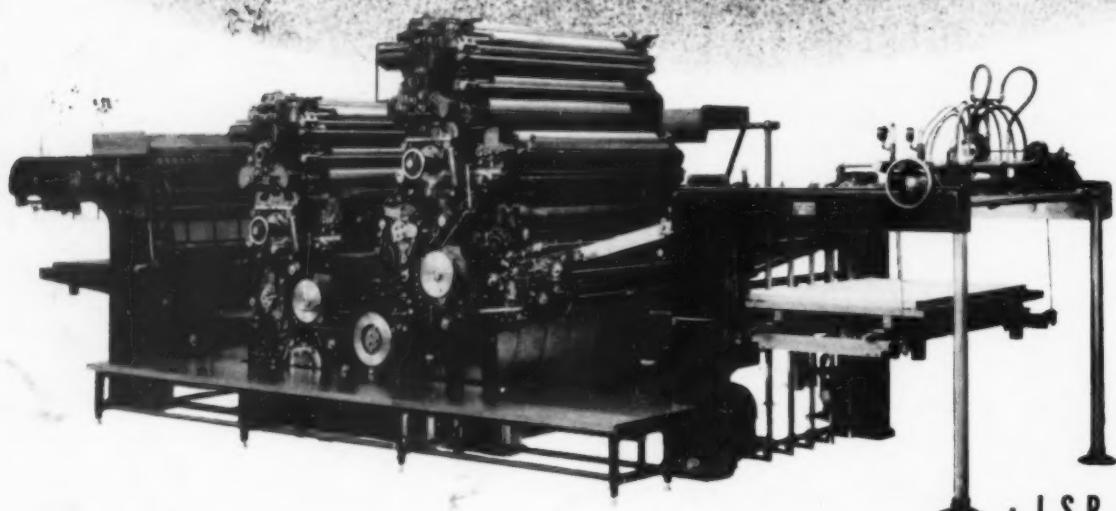
Agfa Reprolith Films

MADE IN U. S. A.



HARRIS

provided the Stepping Stones
for OFFSET PROGRESS



• LSR • 26" x 40"
TWO COLOR OFFSET

For over a quarter of a century Harris has provided the stepping stones for Offset progress. The first step was the innovation of improvement which paved the way for the advance of this industry as a whole.

Then, the complete line of Harris Presses has enabled lithographers individually to progress in gradual, safe strides from the simplest offset press to larger multi-color units. The benefits of Harris experience, and counsel based on this experience, has been important to the success of many lithographers.

HARRIS LITHO
CHEMICALS

Through research, Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problems.

HARRIS OFFSET PRESSES

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